

THE
AMERICAN FARMER:
DEVOTED TO
Agriculture, Horticulture, and Rural Economy.

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OCTOBER.

"O what a glory doth this world put on
For him that with a fervent heart goes forth
Under the bright and glorious sky, and looks
On duties well performed and days well spent!
For him the wind, ay, and the yellow leaves,
Shall have a voice, and give him eloquent teachings."

Work for the Month.

TOBACCO.

At this late day of the season little need be said as to the cultivating or housing of the crop. The planter will press forward his work so as to make it secure in the house as fast as it ripens, and whether ripe or not, all should be cut by the 10th of the month. Any little advantage gained in growth or ripening beyond this date is overbalanced by liability to freezing in the house if not cured before hard frosts set in. If fire is to be used in curing, the case is different.

During the process of curing, let the house be opened as much as possible to sun and air, in all good weather, except in high winds, when the tobacco is liable to be whipped and blown about. In rainy or damp weather, and at night, after the process of curing is somewhat advanced, the house should be kept as close as possible. If worms are numerous, they should be carefully destroyed before cutting the tobacco; otherwise they will continue to consume the best leaves, as they hang in the house. These remarks are all intended for crops cured without fire. No one should undertake the risky work of curing

with fire, without the help of a well-experienced guide.

WHEAT SEEDING.

In no part of Maryland should the wheat-seeding be postponed beyond the 5th of the month. They who, for fear of the Hessian fly, wait so long, should be in all respects then ready to have the work completed at the earliest day. The ploughing and harrowing should be thoroughly done, fertilizers on hand, and teams in order for a prompt beginning and early ending.

FERTILIZERS.

It is hardly necessary to make a suggestion as to fertilizers. There are many articles in the market of undoubted value, and each neighborhood will probably have its favorite. However fertile the soil, we should be unwilling to sow a crop without fifty pounds or more of some well-tested fertilizers, put in the drill with the seed. We mention fifty pounds as the least to be used under any circumstances. As regards home-made manures, they are only desirable for the wheat crop when they have been well decomposed, and in no case should they be buried deeper than the seed.

PREPARING SEED.

The simplest method of preparing seed for sowing is to wash thoroughly in a strong brine, pouring it in slowly, so that grains of smut and other impurities may float and be skimmed off. It may remain in the brine some hours, and then, after being well drained, powdered and dried with quicklime, plaster, ashes, &c.

SOWING GRASS SEED.

Timothy seeds may be sown at any time that we sow wheat, but the earlier the better. Orchard grass may be sown now, but earlier spring sowing is usually preferred for this grass.

THE CORN FIELD.

The only suggestion for the corn field at this season is to protect it properly against trespassers, and to secure the fodder as soon as possible under shelter. If you have followed the old fashion of making a crop of pumpkins in your corn field, they should now be brought to some point convenient for feeding. They are excellent food for milch cows, and for hogs in the early stage of fattening.

POTATOES.

The crop of potatoes should be dug the last of the month, to be secure against hard frost. A potato plough saves much labor in harvesting, and will save its cost in a crop of a few acres. After a little exposure to the air, to dry off the moisture, put them away in the cellar, if you have one, being careful as to ventilation.

FEEDING HOGS.

The feeding of hogs for pork, which is more or less the business of nearly every farmer, should be begun as early in this month as can be made convenient. The new corn, being the chief, if not sole reliance for feeding, this matter is very likely to be delayed until it becomes quite convenient to gather a portion of that crop. This throws the necessary time for feeding into the cold weather of December, when it takes a much larger quantity of food to make the same amount of flesh and fat. A certain portion of caloric is necessary to keep up the temperature of the body, and when the atmosphere becomes cold, the carbon of the food, which would turn to fat, is burned out, to keep the animal comfortable, and an extra consumption is required to answer both purposes. Hence the necessity also for tight houses and comfortable bedding in severe weather. Hogs that have had the run of a good pasture without other food, will not fatten well in less than five weeks; if not in very good condition when brought to the pen, six weeks will not be too long a time. They should be confined, therefore, by the 20th of the month at latest.

For the greatest economy of food, close pens, with floors a foot or more from the

ground, should be used. These floors may be tight, but inclining a little in one direction, and sufficiently opened at one side to get rid of litter and manure. If we were fattening for home consumption and without the strictest regard to economy, we should fatten in a small pasture with running stream, providing only a shed for sleeping. There is great economy both in grinding and cooking the food of fattening hogs. A practical objection to it lies in the fact that our great article of food, Indian corn, is not sufficiently dry, when the season commences, to shell readily, and this circumstance, and our convenience at a busy period, makes it very agreeable to throw into the pens the whole ears. Nothing however can justify the great waste of feeding to any animal unground grain.

SHELTER FOR STOCK.

No farmer can be excused for allowing any beast in his care to be houseless during the winter. The least that can be provided for his stock is a shed, open at the South.—While cattle will necessarily consume more food in an open shed than in a tight stable, it is a fact that they are more healthy in the former than in the latter. The reason of this lies in the imperfect ventilation of the stable.

FEEDING CATTLE.

For the same reason given for feeding hogs early, begin to feed at once such cattle as are designed for beef. A moderate quantity of grain in connection with a good pasture, will fatten them rapidly during this and next month. The great waste of feeding unground corn may be obviated by having one store hog to every head of cattle to run in the pastures with them. Milch cows, if well fed, will make more and better butter during this and next month than at any other season. Pumpkins make an excellent addition to their food, and corn meal—even two quarts daily—adds very much to the richness of the milk. Give salt once a week.

It is infinitely more honorable to forgive a wrong, than to revenge it. The one makes thee like to God; the other makes thee like to the devil. It is the chiefest excellency, by which God delights to be set forth. And certainly men can never so much triumph over thee by their injuries, as thou mayest over them by forgiveness.

The Vegetable Garden.

OCTOBER.

Cabbages.—Plants for next year's early crop should be transplanted the latter part of the month. The ground should be thoroughly prepared with plough or spade and highly manured, then thrown in ridges running North and South, three feet apart. The plants should be set a foot apart about the middle of the ridge, and on the side least exposed to the sun. Let it be borne in mind that the danger of frost is not in the freezing but the thawing.—Therefore whatever plants you mean to protect in winter, shield them from the sun.

Cauliflowers.—Cauliflowers, for spring use, should be set in cold frames, as they require the protection of glass during severe weather and transferred to open ground in spring.

Spinage.—Growing crops of spinage should be thinned and kept clear of weeds.

Lettuce.—Transplant from the beds into rich light soil, and close enough to be protected by frames when cold weather sets in. The hardy sorts wanted for later use in spring may be put in borders without protection.

Celery, etc.—Continue to earth up celery in dry weather, and keep other growing crops weeded and earthed.

Onions for Seed.—Toward the last of the month select the largest and best onions for seed, and set them out in rich, well-prepared ground.

Carrots, Beets, etc.—Take up these and other root crops, except the parsnip and salsify, and secure for winter by the last of the month.

The Flower Garden.

Dahlias.—These will be in perfection in the early part of the month. If the weather be dry, they should be copiously watered at the roots.

Chrysanthemums.—Water these with liquid manure, and expose the plants freely to light and air.

Annals.—Save seeds of all showy annual and perennial plants.

Tulips, Hyacinths, &c.—These should be now put in deep, rich beds. Plant from three to four inches deep, putting a little sand under each bulb.

Ponias, Lilies, &c.—These and all the hardy

bulbous roots should be planted now, if not already done, as directed for tulips.

Perennial and Biennial Flower Roots.—These may all be taken up safely, divided and transplanted.

Edgings.—Box and other edgings may be planted this month.

Hedges.—It is a good season for planting hedges of all sorts; though evergreen hedges are best planted in spring.

Flowering Shrubs.—Prune flowering shrubs and take up and plant suckers from about them.

Stock Gilly and Wall Flowers.—Plants of these to be taken in the house in winter should be taken up carefully now and put in pots, and kept in shade until they become established.

Walks and Lawns.—Let grass walks and lawns have their last shaving and rolling, and leave them in neat order for winter. Roll and clean gravel walks once a week.

THE GREEN HOUSE.

If not already done, take in now all succulent and tender plants, and very shortly, Orange, Lemon, Lime Trees, &c., and all Geraniums, and lastly myrtles and hardier sorts.

The Fruit Garden.

Gathering Fruit.—Let all fruit be gathered carefully by hand. Apples, to keep well, should lie in heaps ten days or more after being gathered, and when about to be packed in barrels the moisture should be wiped from each one. Pears should be taken from the trees whenever the stem will part readily and ripened on shelves.

Raspberries.—The canes which bore fruit this year should be cut away, and the new growth alone left. The less hardy sorts should be laid carefully down and a little earth thrown on them before the ground freezes. New plants may be put out this month, or in the spring. Plant shoots of this year with good fibrous roots, along borders four feet apart, and cut the canes back to three feet in length. The soil must be rich and moist, if practicable.

Gooseberries and Currants.—Plantations of these may be made this month. New plants grow readily from cuttings.

Strawberries.—It is still not too late, though

better done before, to plant runners for new beds, if you are not sure of an abundance of fruit from the old ones. Throw over them, before winter, any coarse litter that is free from grass seeds. They will bear, but not abundantly, the first season. A deep, rich and well-worked soil is essential to them.

Preparation for Planting.—Prepare as early as you can for planting trees. Dwarfs alone should be planted in the fruit garden, and these require as thorough preparation and cultivation as garden peas. Dig, trench and mix in well rotted stable manure, and plant on no soil that is not naturally or artificially well drained.

Fruit Seeds.—Seeds of peaches and other stone fruits should never be allowed to dry, but kept in moist earth, if you would be sure to have them vegetate.

Champagne Cider.

We annex, from a very respectable source, the following on the subject of Champagne Cider. The process of making a good article of cider, as free as possible from alcoholic influences, is so simple that any one who has the apples can have it in his family.

After the apples are crushed, press out the juice, put in a clean cask and leave out the bung. It will work without anything being put in; in four or five days draw off, and put into another clean cask. Do this three or four times, allowing as many days between each changing. It does not work well in cloudy weather, and so must be left longer. If it does not fine well it will not keep sweet. To assist the fining, dissolve six ounces of gelatine for each hogshead and mix; do this previous to the last change of cask.

The quality of cider depends upon the sort of apples used. Two parts sour apples and one part sweet will make good cider.

Now observe, let there be no time lost in the whole process, but allow sufficient time to do it well. It is particles of pulp left in the cider that causes it to turn sour. To effect the proper clarifying and working, it will require four changes of cask, that is if you want first rate cider. Do not put any water in any part of the process—having all juice.

After the last change, the cider may remain in the cask, bunged up, two or three months. You can then bottle off—lay the bottles down

in a cold, dark cellar—some will burst, but then you must put up with it. It will be fit to use during the summer, when all parts of the work have been well done. The bottled cider will be equal to champagne, and will keep sweet. Some put brandy, rum, gin or other spirits in—it does not preserve it, but only makes it intoxicating.

If you can get pine-apples very cheap, two or three crushed up in a hogshead of juice will be a great improvement. If you keep the cider in casks, be sure that they are sound and air-tight, and very clean. Wash out with cold water, and scald out your cask—fumigate with rag of sulphur—melt the sulphur and then dip the rag in, a piece about one foot square will be sufficient for a hogshead—light the rag and then put in the hogshead—leave out the spile peg only.—This will destroy all must or mildew, or any other bad taste in the cask.—*Ec.*

Animals that Chew the Cud.

Ruminating animals gather their food rapidly, give it a few cuts with the teeth, and swallow it. It goes to an interior receptacle, where it is moistened; this is very essential if it be dry hay. When the animal has filled himself, he masticates the food thus stowed away in his stomach, raising it cud by cud. When a portion is completely masticated, it passes to another receptacle, and the process of digestion goes on. Thus an ox, if left to himself, will raise and masticate all his food thus stowed away in his stomach. If he be pushed and worked hard, and does not have time to masticate, he falls off in flesh, his health is poor, his digestion incomplete.

The horse, on the contrary, however much in a hurry he may be, must masticate each mouthful before he swallows it. A hungry ox let into a meadow will fill himself in twenty minutes, while a horse would want at least an hour and twenty minutes to take the same amount of grass. The ox, deer, sheep, goat, chamois and rabbit being the natural prey of ferocious beasts, are endowed with the extra stomach in which hastily to stow away the food without mastication. This may, perhaps, be regarded as a wise provision of nature, enabling them to sally forth where the food is plenty, and in a short time fill themselves and retire to a place of safety to ruminate their food at their leisure.—*Ec.*

Agricultural Education.

There will be found on another page a programme of the University of Edinburgh for conferring University Degrees of *Bachelor* and *Master of Agriculture*. It is one of the advance movements of the age, and one of many signs that the efforts in behalf of agricultural elevation which have characterized the quarter of a century past, have had an influence in the world of science and letters, even beyond what has been hoped for.

In curious conjunction with this first sign of recognition from the old universities of learning, we give, what may be called a curiosity of literature, in an extract from an Essay on Agriculture by Abraham Cowley, written more than two hundred years ago. It will well repay the reader, who takes interest in the literature of agriculture or in agricultural education.

Cowley's plan of a "Philosophical College," or "*Proposition for the Advancement of Experimental Philosophy*," was preferred by Dr. Johnson to Milton's Academy.

In his Essay on "Agriculture" he expresses "the wish (but cannot in these times much hope to see it,) that one college in each university were erected and appropriated to this study," with "four professors" to teach the four parts; 1. Aration; 2. Pasturage; 3. Gardens, Orchards, Vineyards and Woods; 4. Rural Economy, Bees, Swine, Poultry, Fish, and other Sports of the Field. The instruction was to be free—"that none, though never so rich, shall pay any thing for their teaching." The institution was to be furnished with suitable buildings and grounds—"Towers for the Observation of the Celestial Bodies"—"Laboratories for Chemical Operations"—"Gardens for all manner of experiments concerning Plants—and for the convenient receptacle for all sorts of creatures."

Abraham Cowley was, like many other wise men, somewhat ahead of the times he lived in. After two centuries, so far as agriculture is concerned, we find ourselves just approaching, practically, the ground he occupied.

Extracts from an Essay on Agriculture,

By Abraham Cowley. (Written in 1661.)

There is no other sort of life that affords so many branches of praise to a panegyrist—the utility of it to a man's self: the usefulness or rather necessity of it to all the rest of mankind: the innocence, the pleasure, the an-

tiquity, the dignity. The utility (I mean plainly the lucre of it) is not so great now in our nation as arises from merchandise and the trading of the city, from whence many of the best estates and chief honors of the kingdom are derived: we have no men now fetched from the plow to be made lords, as they were in Rome to be made consuls and dictators, the reason of which I conceive to be from an evil custom, now grown as strong among us as if it were a law, which is that no men put their children to be bred up apprentices in agriculture, as in other trades, but such who are so poor, that, when they come to be men, they have not wherewithal to set up in it, and so can only farm some small parcel of ground, the rent of which devours all but the bare subsistence of the tenant: whilst they who are proprietors of the land are either too proud, or, for want of that kind of education, too ignorant to improve their estates, though the means of doing it, be as easy and certain in this as in any other track of commerce. If there were always two or three thousand youths for seven or eight years bound to this profession, that they might learn the whole art of it, and afterwards be enabled to be masters in it, by a moderate stock, I cannot doubt but that we should see as many aldermen's estates made in the country, as now we do out of all kinds of merchandising in the city. There are as many ways to be rich, and, which is better, there is no possibility to be poor, without such negligence as can neither have excuse or pity; for a little ground will, without question, feed a little family, and the superfluities of life (which are now in some cases by custom made almost necessary,) must be supplied out of the superabundance of art and industry, or condemned by as great a degree of philosophy.

As for the necessity of this art, it is evident enough, since this can live without all others, and no other without this. This is like speech, without which the society of men cannot be preserved; the others like figures or tropes of speech which serve only to adorn it. Many nations have lived, and some do still, without any art but this; not so elegantly, I confess, but still they live, and almost all the other arts which are here practised, are beholding to this for most of their materials.

The innocence of this life is the next thing for which I commend it, and if husbandmen preserve not that, they are much to blame, for

no men are so free from the temptations of iniquity. They live by what they can get by industry from the earth, and others, by what they can catch by craft from men. They live upon an estate given them by their mother, and others upon an estate cheated from their brethren. They live like sheep and kine by the allowances of nature, and others like wolves and foxes by the acquisitions of rapine. And, I hope I may affirm (without any offence to the great) that sheep and kine are very useful, and that wolves and foxes are pernicious creatures. They are, without dispute, of all men the most quiet and least apt to be influenced to the disturbance of the commonwealth: their manner of life inclines them and interest binds them to love peace. In our late mad and miserable civil wars, all other trades, even to the meanest, set forth whole troops, and raised up some great commanders, who became famous and mighty for the mischief they had done; but I do not remember the name of any one husbandman who had so considerable a share in the twenty years' ruin of his country, as to deserve the curses of his countrymen; and if great delights be joined with so much innocence, I think it is ill done of men not to take them here where they are so tame and ready at hand, rather than hunt for them in courts and cities, where they are so wild, and the chase so troublesome and dangerous.

We are here among the vast and noble scenes of nature; we are there among the pitiful shifts of policy: we walk here in the light and open ways of the divine bounty; we grope there in the dark and confused labyrinths of human malice: our senses are here feasted with the clear and genuine tastes of their objects; which are all sophisticated there, and for the most part overwhelmed with their contraries. Here pleasure looks, methinks, like a beautiful, constant, and modest wife; it is there, an impudent, fickle, and painted harlot. Here is harmless and cheap plenty, there guilty and expensful luxury.

I shall only instance in one delight more, the most natural and best natured of all others, a perpetual companion of the husbandman, and that is the satisfaction of looking round about him, and seeing nothing but the effects and improvements of his own art and diligence, to be always gathering of some fruits of it, and at the same time to behold others ripening, and others budding: to see

all his fields and gardens covered with the beauteous creatures of his own industry; and to see, like God, that all his works are good.

—*Hinc atque hinc glomerantur Orcades; ipsi
Agricolæ tacitum pertendant gaudia pectus.*
On his heart-string a secret joy doth strike.

The antiquity of his art is certainly not to be contested by any other. The three first men in the world were a gardener, a ploughman, and a grazier; and if any man object that the second of these was a murderer, I desire he would consider, that as soon as he was so, he quitted our profession and turned builder. It is for this reason, I suppose, that Ecclesiasticus forbids us to hate husbandry; because, says he, *the Most High has created it*. We were all born to this art, and taught by nature to nourish our bodies, by the same earth out of which they were made, and to which they must return and pay at least for their sustenance.

Behold the original and primitive nobility of all those great persons, who are too proud now, not only to till the ground, but almost to tread upon it. We may talk what we please of lilies, and lions rampant, and spread eagles in fields *d'or*, or *d'argent*; but if heraldry were guided by reason, a plough in a field arable would be the most noble and ancient arms.

All these considerations make me fall into the wonder and complaint of *Columella*. How it should come to pass that all arts or sciences, (for the dispute which is an art, and which a science, does not belong to the curiosity of us husbandmen,) metaphysics, physic, morality, mathematics, logic, rhetoric, &c., which are all, I grant, good and useful faculties, (except only metaphysics, which I do not know whether it be any thing or no,) but even vaulting, fencing, dancing, attiring, cookery, carving, and such like vanities, should all have public schools and masters, and yet that we should never see or hear of any man who took upon the profession of teaching this so pleasant, so virtuous, so profitable, so honourable, so necessary art.

A man would think, when he is in a serious humour, that it were but a vain, irrational and ridiculous thing, for a great company of men and women to run up and down in a room together, in a hundred several postures and figures to no purpose, and with no design; and therefore dancing was invented first, and practiced anciently in the ceremonies of the

heathen religion, which consisted all in mummery and madness; the latter being the chief glory of the worship and accounted divine inspiration. This, I say, a severe man would think, though I dare not determine so far against so customary a part now of good breeding. And yet, who is there among our gentry, that does not entertain a dancing-master for his children, as soon as they are able to walk? But did ever any father provide a tutor for his son, to instruct him betimes in the nature and improvements of that land which he intended to leave him? That is at least a superfluity, and this a defect in our manner of education; and therefore I could wish, (but cannot in these times much hope to see it) that one college in each university were erected and appropriated to this study, as well as there are to medicine and the civil law. There would be no need of making a body of scholars and fellows, with certain endowments as in other colleges; it would suffice, if after the manner of halls in Oxford, there were only four professors constituted, (for it would be too much work for only one master, or principal, as they call him there,) to teach these four parts of it. First, Aration, and all things relating to it. Secondly, Pasturage. Thirdly, Gardens, Orchards, Vineyards, and Woods. Fourthly, all parts of Rural Economy, which would contain the government of bees, swine, poultry, decoys, ponds, &c., and all that which *Varro* calls *Villaticas Pastiones*, together with the sports of the field (which ought to be looked upon not only as pleasures, but as parts of house-keeping) and the domestical conservation and uses of all that is brought in by industry abroad. The business of these professors should not be, as is commonly practised in other arts, only to read pompous and superficial lectures out of *Virgil's Georgics*, *Pliny*, *Varro*, or *Columella*, but to instruct their pupils in the whole method and course of this study, which might be run through perhaps with diligence in a year or two; and the continual succession of scholars, upon a moderate taxation for their diet, lodging and learning, would be a sufficient constant revenue for the maintenance of the house and the professors, who should be men not chosen for the ostentation of critical literature, but for solid and experimental knowledge of the things they teach; but it is needless to speak further of my thoughts of this design, unless the present disposition of the age allowed more probability of bringing it into execution.

Agricultural Degrees.

We learn from British exchanges that the University of Edinburgh intends conferring the degrees of Bachelor and Master of Agriculture ("Agr. B." and "Agr. M.") on all who may be found worthy of such distinctions. Before any candidate can graduate in agriculture, he must satisfy the examiners as to his general attainments by undergoing a preparatory examination, unless that be rendered needless by the possession of certain specified certificates of qualification. The following is the published programme:

"The candidate who has passed successfully this examination may present himself at the next examination for his degree of Bachelor of Agriculture. For this examination the candidate must produce certificates of acquaintance with practical agriculture, and is required, with the view of specializing his studies, to profess one, and not more than one, of the following groups of subjects, with their practical relations to agriculture: A. Natural Sciences—Botany, Geology and Zoology; B. Experimental Science—Chemistry and Physics; C. Mechanical Science—Mechanics and Engineering. The certificates of the Royal Agr. Society, the Highland Society, and the Royal Agr. College will be accepted for practical agriculture.

Successful candidates who have thus acquired the Degree of Agr. B. may at the next period of examination, provided they have attained the age of 21, proceed to the examination for the Degree of Master of Agriculture (Agr. M.) For this degree the candidate will be required to submit to a searching examination on one of the following subjects, in its special relation to agriculture; A. Agricultural Chemistry—organic and inorganic; B. Agricultural Mechanics—Machinery and Implements; C. Engineering (Civil), Surveying and Draining, &c.; D. Natural History—Botany, Geology, &c.; E. Animal Physiology—breeding, rearing, &c., of animals. The examinations for degrees will be conducted by university examiners, and an examiner appointed by the Highland Society."—*Boston Cultivator*.

California is destined to excel all other countries in silk-growing, because there are no thunder storms to destroy the silk worm's eggs.

Demands of Thorough Cultivation.

Preparation, Restitution, and Tillage, are three terms, which include all that need be done with our arable grounds to cause them to bring forth abundantly the products of good culture. The last, indeed, in general use, embraces more of meaning than we assign to it here, including a part of what we call preparation, but not all. It does not go to the root of the matter, and is not understood ordinarily to mean more than mere ploughing. We would confine it, therefore, to all after workings of planted crops, and adopt another term, which shall be understood to mean all that is necessary to be done in anticipation of planting, to put the ground in the best condition for production—the term *preparation*.

Preparation consists not in ploughing only, because that may be, and often is, very insufficient for the purposes we have in view. When ploughing is enough, then it is that done in the best manner, and to the full depth that can be effected by a good plough and team—seven inches the minimum, and twelve not too much. Beyond this, thorough drainage is often necessary, and perhaps always useful. This will seem extravagant to many, but we believe the day will come when it shall be acknowledged that no acre of land can produce to the limit of its capabilities that has not through all its bulk, to the depth of full two feet, free passage, downward and upward, for water, and with it air. *Subsoiling*, that is, breaking the subsoil beneath the first ploughing, by a separate operation, is useful on ground naturally well drained, and is a temporary but very indifferent substitute for drainage on others. Its greatest use is in completing the breaking up of drained lands.

These processes of preparation are far from being duly appreciated in common opinion, and indeed are not to be considered practicable in our common modes of cultivation.—With large surfaces at command, we adopt the familiar practice of skimming, improving on it to some extent by deepening our furrows and draining a wet spot here and there. When the necessity comes upon us by the high price of land, or otherwise, of intensifying, to use a French idea, our operations, we will find out the value of this mode of preparation. The wiser and more intelligent will learn it in advance.

One of the most experienced and well informed fruit culturists of the day has ex-

pressed the opinion that if all the money spent in the twenty years just passed in prepared fertilizers had been expended in drainage and thorough preparation of the ground, the country would have been much richer for it. His opinion was based upon a strong conviction of the imperfection of our modes of preparation, and of the great undeveloped resources existing in the understratum of our cultivated lands. This opinion is a remarkable recurrence, based on late experience, to the old teachings of Tull and his followers, and with more reason. Tull knew nothing of the modern improvement of thorough drainage, and with the imperfect implements of his day could operate on a very few inches of the surface soil, which nothing hinders now, from bringing two feet of depth within the range of the forces we would subject it to.

It gives us a lesson of modesty to recur occasionally to the teachings of men who lived a hundred years before the present times of peculiar enlightenment, as we think, and to find that in some points, at least, of good husbandry we have advanced so little beyond their standpoint. Tull's opinions on cultivation and manures and their relative value are well known. His invention of the horse hoe, we are told, made a revolution in tillage. That was the offspring of his theory that plants feed upon the soil, and that the end of cultivation was to bring it to that fineness of condition, to that state of reduction, which should fit it for its office in this respect.—Manure, he thought, might forward this design, but had no value otherwise, and was pernicious in its effects upon vegetables and vines.

Another old writer, John Mills, author of a work on "Husbandry," a follower of Tull, says: "It is much more profitable to increase the fruitfulness of land by tillage than by dung. First, because only a certain quantity of dung can oftentimes be had; the produce of twenty acres being scarcely sufficient to dung one; whereas the particles of the earth may be divided and subdivided *ad infinitum*. The benefit that can be procured from dung is, therefore, limited; whereas no bounds can be set to the advantages which arise from tillage.

"2d. Most plants that are reared in dung, have not the fine flavor of those that grow in a good soil, which has not been dunged.

Greens and fruits are seldom so good in the neighborhood of great cities, where dung abounds as in country gardens, where it cannot be so lavishly bestowed. But nothing is more striking than the difference between wine produced by a vine that has not been dunged at all and that which has been made from a vine that has been greatly dunged."

While a positive injury is attributed to the dung, it is not admitted that it has any other effect than that which may be better brought about by working the soil. "The more the particles of the earth are divided the more its internal pores are multiplied; the more the surface of those particles is increased, the more the earth is enabled to furnish the food of plants, and, consequently, the more fruitful it is rendered."

"This division may be effected by two ways: by fermentation—that is, by mixing dung with the earth, or by breaking its parts mechanically, by tillage, whether it be with the spade, plough or hoe, or any of the different instruments that have been invented to stir the earth."

We know better than this now as to the value of manures, but we do not better appreciate the great importance of the extreme degree of subdivision that can be accomplished. But we know how to accomplish it more effectually.

"Restitution," the second in order of the terms which include our scheme of thorough cultivation, embraces all that is meant ordinarily by the term manuring. It is true, some modes of manuring act mechanically or chemically on the soil, and so indirectly in furnishing supplies of plant food, but in the usual acceptance of the term it means supplying the ground with that which plants consume; and applied to soils not absolutely new, it means the "restitution" of such elements as have been taken away by crops grown previously.

The investigations of modern science, combined with observation and experience, have determined generally what elements are mostly consumed, and what therefore, need to be restored; and also what substances furnish them most economically. That our knowledge is, as yet, very imperfect in this direction, must be freely admitted; but enough is known to make sure that the other conditions of thorough cultivation being attended to, the profits of land working will be in

proportion to the liberal use of them, applied with judgment and discretion, and under the lights of experience at the command of any inquirer.

"Tillage," meaning the after working of planted crops, is of little importance comparatively when the demands of "preparation" and "restitution" have been complied with. It consists only of that degree of stirring of the surface soil which will effectually keep down the growth of grass and weeds, and keep the whole surface open to atmospheric influence. The longer this can be done without damaging interference with the roots or the body of the growing crop, the better.—*Weekly Sun.*

The Chinese on Frogs.

The following official dispatch from the head of one of the Departments of the Chinese Empire, is published in the China Mail:

Yih, by imperial appointment Che-foo of the department of Sung-kong, concerning the catching of frogs.

Tsing-wa (frogs) commonly called Tien-ki (field fowl) or Noo-koh-chung (preserver of the crops,) destroy all insects hostile to agricultural interests, preserve the crops from injury, and consequently are of great worth to the farmer.

It appears there is a class of ignorant people, who, in the night, by means of dark lanterns, and in the day by means of spears and nets, catch these frogs by the basketful, and bring them to market for sale. This is done simply to get a little to eat or gain a few cash. The practice is an old one, but to us detestable in the extreme, and the great officials of every place are constantly commanding us to put a stop to it. The breeding season has now come, and it is imperatively necessary to prevent the destruction of frogs, in order to preserve the crops from the ravages of the locust. We therefore inform the Ti-paous, landlords and landrenters of this district, that whether in the city or country, should any one, as formerly be seen catching or selling frogs, he must be brought before our court in order that he may receive a severe beating—no mercy will be shown. Should the official employees or the Ti-paous know of any case, but, for private considerations, not bring it to our notice, such parties being discovered, shall not be leniently dealt with. Let each obey with trembling—oppose not.

Experiments at the Michigan Agricultural College.

Prof. Harris of the Cornell University of New York, in the August number of *American Agriculturist*, gives the following account in part of what he saw there at Mich. College:

I have just returned from a visit to the Michigan Agricultural College at Lansing. It is doing a great work, not only in educating the students, but in making experiments. Dr. Miles, the Professor of Agriculture, was made for the position, and has accomplished wonders. The whole farm is admirably managed, and does great credit to the students, who perform nearly all the labor.— During the morning they attend to their various studies. President Abbot took me into the rooms where they were reciting, and a finer set of young men I never saw together. Most of them are farmers' sons. In the afternoon they put on a working suit, and for three hours are employed on the farm, or in the garden or tool house. They are allowed from 6c. to 7½c. per hour. Some were hoeing corn; others, pulling out stumps with a machine; others were helping the sheep shearers, tying up the wool, weighing the fleeces of the different breeds and their grades, and entering the weights in a book, with appropriate remarks in regard to the length of staple, fineness, etc. One active young fellow was pushing a hand-garden cultivator through the cleanest and best crop of onions I ever saw growing; another was cultivating a young apple orchard; others were in the hay field where a new mower had just started. And the foreman told us that, before working hours, there had been quite an animated discussion as to whether the clover was ripe enough to cut; the freshmen, as a rule, taking the ground that it was too green, and the seniors that while there might not be as much bulk, the hay would be sweeter and more nutritious than if allowed to stand longer. Another question discussed was whether it was or was not best to use a tedding machine in making clover hay. A horse was attached to a tedder, and though the clover was hardly wilted at all, and was very heavy, worked to perfection, and an opportunity was afforded of testing the matter. A two-horse cultivator was at work in the corn field, the young man riding and steering. It was light work, and though the day was very hot, neither man nor horse needed to

stop to rest every few bouts, as is so generally the case with an old fashioned one-horse "corn scratcher." Now, you need not tell me that a young man will not learn a good deal at such an institution. Leaving science entirely out of the question, what he sees of good cultivation, good implements and machines, improved breeds of cattle and sheep and pigs, will go far toward making him a good farmer. Success to the American Agricultural Colleges, and may the day soon come, (and it is coming very fast,) when trained minds and skilled hands shall banish drudgery from American farms. Mark you, I am no advocate for ease and indolence. I believe in work; but I want work to tell. As I came home I saw more than one case where a man was cultivating corn, with a boy riding the horse. The poor horse doubtless wished the boy was at college. Near Detroit I saw two men cultivating potatoes, one leading the horse, and the other holding the cultivator!

Prof. Miles has been making some experiments in feeding grade Merino sheep, grade South-Downs and grade Cotswolds. The Merinos and Cotswolds were lambs, and the South-Downs yearlings. The former two, therefore, give results that are strictly comparative; the latter not. These grade lambs were from common Merino ewes, crossed in the one case with a thoroughbred Vermont Merino ram, and in the other with a thoroughbred Cotswold. "What do you mean," I asked Professor Miles, "by common Merino ewes?" "The ordinary kind of sheep in this section, such sheep as could have been bought here last fall for 75 cts. to \$1 a head." The lambs were shut up in pens December 13th, and were fed corn and clover hay for 23 weeks, or until the 15th of May. At the commencement of the experiment, the two grade Merino lambs weighed 125½ lbs., (one 70 lbs.; the other 55½ lbs.) The two grade Cotswolds weighed 158 lbs., (one 86 lbs., the other 72 lbs.)

The Merinos ate 325 lbs. of hay and 249 lbs. of corn, and gained 36½ lbs. The Cotswolds ate 398 lbs. hay and 369 of corn, and gained 67½ lbs. A little figuring will show that it took 1,572 lbs. of hay and corn to produce 100 lbs. of increase with the Merinos, and only 1,136 lbs. with the Cotswolds.

Prof. Miles has figured up the amount of food consumed for each 100 lbs. of live weight. In the 23 weeks, the grade Merinos, for 100

lbs. of live weight, ate 231.81 lbs. of hay and 168.13 lbs. of corn, and the grade Cotswolds, 212.82 lbs. of hay and 186.43 lbs. of corn.—The Cotswolds ate more corn and less hay in proportion to live weight than the Merinos; but the total amount of food consumed in proportion to live weight is almost identical. Thus the Merinos consumed 399.96 lbs., and the Cotswolds 399.25 lbs.; or a little over 2½ lbs. of food per day for each 100 lbs. of live weight.

It is very evident, therefore, that for the production of mutton the grade Cotswolds are far superior to the Merinos. It is equally clear, too, that by the use of thoroughbred Cotswold or South-Down rams we can soon get a very useful class of mutton sheep from common Merino flocks. And at present the wool from these grade Cotswolds is worth full as much as ordinary Merino, and a good deal more than that of fleeces which are more than half yolk.

Thin Sowing.—Have You Tried It?

If not, pray do so, especially if you are a lover of *£ s. d.* No man should venture to say that such a thing will not answer, unless he can prove it has failed. A mere supposition or imagining in such matters has no value whatever. I have often brought color into the cheeks of agriculturists who stated positively that thin sowing would not answer, by mildly asking whether they ever had tried it?

There is nothing more easy than to try (as I have done) half an acre or an acre with a diminished quantity of seed, so as to deduce a comparative result. After some fifteen years of such experiments I have come to the conclusion that thick sowing in wheat, barley, and oats, not only wastes much seed, but inflicts a much heavier loss by preventing the full development of the plant, and thus greatly diminishing the crop in quantity and lessening its quality.

Farmers quite comprehend the necessity for giving ample room for the growth of their root crops, but it does not appear to me that they perfectly understand the nature of the wheat and other grain plants. I have heard many say that they sow thick to prevent tillering and to smother the weeds. Although I do not recommend a general sowing of so small a quantity as a peck an acre, I find that it produces an ample and superior crop, and it especially illustrates the natural habit of

our grain plants, as may be now seen on half an acre in one of my wheat fields, the rest of the field, right and left, being a splendid crop, from one bushel per acre—my usual quantity. Both thick and thin were sown, or rather drilled and dibbled, on the 20th November, which would be naturally considered much too late for a peck per acre. Well, up it came, a single stem or bodkin from each dibble hole, and we could only see that there was any plant by placing our heads low to the ground and taking a horizontal view. In fact, it looked like a barren fallow from November to April, the rest of the field (one bushel per acre) looking thick and luxuriant.

In April, and early in May, it still looked thin, but the original bodkin gradually surrounded itself with from thirty to fifty other juvenile bodkins, shooting out horizontally. Well might the able and amazing correspondent exclaim, "where can the wheat have come from?" Now (on the 20th June) the half acre strip of fallow has become a fine standing crop of wheat, with ears and kernels fifty per cent. larger than its neighbor. I have been amused by saying to my farm visitors, "you will soon come to the peck an acre," and several walked past it without distinguishing it from its competitors on either side. They evidently looked for a thin crop, which is not now to be found. I could, in the course of several years of experiment, have won a small fortune in wagers. But is it not strange that among some 400,000 British farmers, it is Mr. Mechi only that tries and records these important experiments. Can it be a matter of indifference whether in seed alone we pay ten shillings per acre more or less? The field in which this peck an acre is sown will probably produce six qrs. of wheat, perhaps even more, so that the poor peck has a strong competitor. Which is to be the winner—the peck or the bushel? We shall all know some day. In 1864 and 1865 the peck gave a crop of seven qrs. two bushels, and seven qrs. one bushel—the best on the farm, and the finest sample, for I can distinguish the heap of thin sown grain at once, by its superior size and quality.

It has often surprised me that nearly every kernel vegetates, which is contrary to the opinion expressed by many. As we only put one kernel in each hole, we are enabled to see where any failure takes place. This is the fifth year of the peck an acre experiment, and it certainly promises to be an abundant crop.

Farmers who sow two and a half to three bushels of wheat per acre, and five bushels of oats, seem surprised at the level or even appearance of the heads of corn. An up-and-down crop, like a mixture of tall grenadiers and tiny riflemen, is a sure consequence and evidence of a grand battle, in which the weaker have gone to the wall.

Mr. Hallet is doing an incalculable amount of good by laying down rules for the thin planting of his wheat and other grain.—*F. G. Mechi, June 24.*

Remedies for the Sting of a Bee.

If only a few of the host of cures, so zealously advocated, could be made effectual, there would be little reason to dread being stung.

The first thing to be done after being stung, is to pull the sting out of the wound as quickly as possible. When torn from the bee, the poison bag, and all the muscles which control the sting, accompany it; and it penetrates deeper and deeper into the flesh, injecting continually more and more poison into the wound. If extracted at once, it will very rarely produce any serious consequences.—After the sting is removed, the utmost care should be taken not to irritate the wound by the slightest rubbing. However intense the smarting, and the disposition to apply friction to the wound, it should never be done, for the moment that the blood is put into violent circulation, the poison is quickly diffused over a large part of the system, and severe pain and swelling may ensue. On the same principle, by severe friction, the bite of a mosquito, even after the lapse of several days, may be made to swell again. As most of the popular remedies are rubbed in, they are worse than nothing.

If the mouth is applied to the wound, unpleasant consequences may follow; for, while the poison of snakes, affecting only the circulating system, may be *swallowed* with impunity, the poison of the bee acts with great power on the organs of digestion. Distressing headaches are often produced by it, as any one who has been stung or has tasted the poison, very well knows.

The milky juice of the white poppy is highly recommended. An old German writer states that it will instantaneously allay the pain and prevent swelling.—*Langstroth on the Honey Bee.*

Hogs—Breeding In-and-in.

With pigs there is more unanimity amongst the breeders on the evil effects of inter-breeding, than perhaps with any other large animal. Dr. Druce, a great and successful breeder of the Improved Oxfordshires—a cross race—writes: "Without a change of boars of a different tribe, but of the same breed, constitution cannot be preserved." Fisher Hobbs, the raiser of the celebrated Improved Essex breed, divided his stock into three separate families, by which he maintained the breed for more than twenty years, "by judicious selections from the three distinct families." Lord Western was the first importer of a Neapolitan boar and sow. "From this pair he bred in-and-in, until the breed was in danger of becoming extinct—a sure result (as Mr. Sidney remarks,) of in-and-in breeding." Lord Western then crossed his Neapolitan pigs with the old Essex, and made the first step toward the improved Essex breed.

Here is a more interesting case. J. Wright, well known as a breeder, crossed the same boar with the daughter, grand-daughter, and great-grand-daughter, and so on for seven generations. The result was that in many instances the offspring failed to breed; in others they produced few that lived, and of the latter many were idiotic, without sense even to suck, and when attempting to move could not walk straight. Now it deserves special notice that the two last sows produced by this last course of inter-breeding were sent to other boars, and they bore several litters of healthy pigs. The best sow in external appearance produced during the whole seven generations, was one in the last stage of the descent; but the litter consisted of this one sow. She would not breed to her sire, yet bred at the first trial to a stranger in blood. So that, in Mr. W.'s case, long continued and extremely coarse inter-breeding did not affect the external form or merit of the young; but with many of them the general constitution and mental powers—but especially of the reproductive functions—were seriously affected.

Nathusius gives an analogous and even more striking case. He imported from England a pregnant sow of the large Yorkshire breed, and bred the product closely in-and-in for three generations, and the result was unfavorable, as the young were weak in constitution, and with impaired fertility. One of

the latest sows, which he esteemed a good animal, produced, when paired with her own uncle—known to be productive with sows of other breeds—a litter of six, and the second time on five weak pigs. He then paired this sow with a boar of a small black breed, which he had likewise imported from England, and which boar, when matched with sows of his own breed, produced from seven to nine young; now the sow of the large breed, which was so unproductive when paired with her uncle, yielded to the small boar, in the first litter, twenty-one, and in the second litter, eighteen pigs so that in one year she produced thirty-nine fine animals.

As in the case of several others animals already mentioned, even where no injury is perceptible from moderately close inter-breeding, yet, to quote the words of Mr. Coate, a most successful breeder, who five times won the annual gold medal of the Smithfield Club Show, for the best pen of pigs, "crosses answer well for profit to the farmer, as you get more constitution and quicker growth."—*Darwin's Animals and Plants.*

Cross-Bred Table Fowls.

Some time since I communicated to The Field a short account of some experiments in breeding table fowls, in reference to the origin of the different French breeds. As I have continued the experiment to the present season, I wish to lay the results before your readers.

The experiments were made as follows: Early in 1867, a very fine rose-combed Dorking hen, of great weight and size of framework, was matched with a silver spangled Polish cock, and some very good dark Brahma hens were also matched with another Polish cock, not related to the former. The present year a very fine cock from the first cross (Dorking-Polish) has been running with eight hens of the Brahma-Polish cross. These latter are all iron grey, of good size, and marvelously prolific as egg-producers. The chickens produced by the inter-breeding of these two crosses have been very singular. As always happens in the earlier stages of inter-crossing, no one definite form has been attained, but all sorts of singular variations have occurred, either of which would require much care and selection to establish permanently. One of the young cocks was really an admirable

specimen of a LaFleche, not only in size and form, but also as regards the peculiar nostrils and comb. He was (for he exists only in the past tense, having been present at dinner with me one day last week,) a perfect LaFleche, with one exception—his plumage was black and white, the latter predominating. Another of the same brood is a perfect Houdan, in form, comb, crest, and toes, rather dark in color, and sparsely feathered on the legs. Many of the pullets are well-crested, and several run light in color.

In one respect the experiment has scarcely satisfied me; for though over the average size, the chickens are as large as I could have wished. They do not weigh as much as very first-class Dorkings, or as Brahmas would at the same age, and under similar circumstances as regards rearing and feeding. I wish to try the experiment as to whether the double crossing would not eliminate the small size of the Polish fowl, and yet retain its good table qualities. As it is, my birds do not promise to be larger than the ordinary Houdan of pure breed, and consequently, should I be breeding solely for large size, hardy table crosses, I should revert to that admirable one of the grey Dorking and Brahma, which I have always found so successful.—*W. B. Tegetmeir, in the London Field.*

HINTS FOR THE MANAGEMENT OF GOLD FISH.—Gold fish may be kept ten or twelve years in vessels, (their average period of existence,) by the following precautions: 1. Allow not more than one fish to a quart of water. 2. Use the same kind of water, whether spring or river water, and change it daily in summer; every other day in winter. 3. Use deep rather than shallow vessels, with small pebbles at the bottom (to be kept clean,) and keep them in the shade, and in a cool part of the room. 4. Use a small net rather than the hand while changing the water. 5. Feed them with cracker, yolk of eggs, lettuce, flies, etc., rather than with bread, and then only every third or fourth day, and but little at a time. 6. Do not feed them at all from November to the end of February, and but little during the three following months.—*Ec.*

A farmer in Ohio began the past winter with 125 sheep, and came out in the spring with 124 pelts and 1 sheep. Cause, foot rot.

Fall Ploughing.

Without elaborating the many strong points in favor of fall ploughing, a few of the more prominent benefits may be briefly stated as follows:

1. August and September is a good time to turn over bound out sod land, and manure and re-seed it at once to grass, obtaining a crop of hay the following year.

2. October and November is an excellent time to break up sod land for planting the following spring.

3. The weather is then cool and bracing, and the team strong and hearty for their work; while the weather in spring is more relaxing and the team less able; and spring work being always hurrying, it saves time to despatch as much of the ploughing as possible during the previous autumn.

4. Sod land broken up late in autumn, will be quite free from growing grass the following spring, the roots of the late overturned sward being so generally killed by the immediately succeeding winter that not much grass will readily start in spring.

5. The frosts of the winter disintegrate the ploughed land, so that it readily crumbles in fine particles in spring, and a deep, mellow seed bed is easily made. The chemical changes and modifications resulting from atmospheric action during the winter, develop latent fertility in the upturned furrows, which, with the mellowing influences, materially increase the crops.

6. Most kinds of insects are either wholly destroyed or their depredations materially checked by the late fall ploughing.

7. Corn stubble land may be ploughed late in the fall, and thus be all ready for very early sowing in spring, thereby going far to insure a good catch of grass; the roots of the new seeding hold well, being well established before the droughts of the summer come on.

8. Most land needs deeper ploughing than has generally been practised. Where the subsoil is fine grained, unctuous and close, or where there is a hard pan of good quality, deep ploughing may be at once resorted to, with decided advantage. Where the subsoil is poorer, the ploughing may still be advantageously deepened by degrees, say an inch at each new breaking up. But in by far a majority of cases, deep ploughing may be practised at once—indeed, it may be the *rule* with safety, while shallow ploughing may be the

exception. Plough say nine, ten, eleven, or twelve inches in November. The sub-soil turned up will grow several shades darker by spring. The frosts and atmospheric influences of winter will mellow the soil; the inorganic elements, and all latent fertility, will be made more active for benefiting the crops. In spring, spread the manure and plough it in, or otherwise work it in or mingle it with the soil, to the depth of four inches, or a little more or less, and you have the very best attainable condition for realizing good crops. Deeper ploughing may thus be practised than would at all times be safe, or expedient, if the ploughing is delayed till spring.—*Maine Farmer.*

Seed Wheat Experimental Farm.

Mr. Geo. A. Deitz, of Chambersburg, Pennsylvania, is engaged in the important work of acclimating and testing foreign seed wheats. Since the appearance of his brief advertisement in our last issue, we have sent for and read with much interest his circular, which describes with considerable minuteness a number of varieties of seed wheat with which he has experimented successfully. We have always felt that this is a department of usefulness which properly belongs to Ministers and Boards of Agriculture, and we thoroughly believe that judiciously managed, as it might be under the supervision of a good practical farmer, the testing of foreign seeds might be made immensely beneficial to the agricultural interests of our own and other countries. In the absence of any such arrangement, it is gratifying to find that private enterprise is doing something in this direction. Mr. Deitz's circular contains details and illustrations of the heads of twenty-one varieties of wheat, that have been tested for from two to ten years, with mention of eight varieties only imported the present year, and therefore not yet tested on American soil. The account given of the several varieties appears candid and straightforward. We know nothing of Mr. Deitz beyond his advertisement and circular, but the importance of obtaining new and good seed wheat is so great, that we do not hesitate to recommend trial of the more promising sorts. It is not yet too late for any who are enterprising enough to experiment, to do so. We have sent for three varieties which, judging from the circular, we think most likely to give satisfaction in our soil and

climate. They are the Boughton White, \$5 per bushel; the Weeks' White Bearded, \$6 per bushel, and the French White Chaff Mediterranean, \$7.50 per bushel, American money. The prices are high, but there is much outlay and loss connected with the importing and trial of foreign seeds. In due time we shall give our readers the benefit of our opinion of these wheats.—*Canada Farmer.*

Dogs.

A large dog belonging to the late Mr. Bidley, of Hetton, near Newcastle, being frequently molested by a mongrel, and teased by its continual barking, at last took it up in its mouth, and with great composure dropped it over the quay into the river, without doing any other injury to an enemy so much his inferior.

A gentleman of Whitmore, in Staffordshire, used to leave his terrier in charge with the landlady of the inn at St. Albans, lest he should lose him if he brought him to London. Once on his return, calling as usual for his dog, the landlady told him, with a woeful countenance, that he was lost. "Our great house-dog and he," said she, "had a quarrel, and the poor terrier was so worried and bitten that I thought he never could recover. He, however, crawled out of the yard, and nobody saw him for a week; he then returned, and brought with him another dog, bigger by far than mine, and they both fell on our great dog, and bit him so unmercifully that he has scarcely been able to go about the yard or to eat his food. Your dog and his companion then disappeared, and have never since been seen in St. Albans." The gentleman heard the story with patience, and endeavored to reconcile himself to his loss. On his arrival at Whitmore he found his terrier; and upon inquiry, was informed that he had come home and had coaxed away the great dog, who it seems had accompanied him to St. Albans, and completely avenged his injury.

For the correctness of the following we can vouch of our own knowledge, and the fact recorded in it approaches nearer to the reasoning faculty in the animal than any other we remember to have heard. A favorite spaniel was occasionally left by his mistress to the care of a maid-servant, at a house in Hampshire, not far from Hertford Bridge. On such occasions he had always been well

taken care of, till the old servant being replaced by a new one, she neglected him, and instead of the good fare he had been accustomed to, she threw him a raw sheep's head.

When his mistress returned home, after expressing unusual joy at seeing her, the dog disappeared, but presently returned with the sheep's head in his mouth, which he brought into the drawing-room, where he had never been in the habit of coming before, and throwing it at his mistress' feet in a most offensive state, from the length of time it had been kept, gave her a most significant look.

The dog had in fact buried the sheep's head in the ground, whence he was seen to scrape it up, when he quitted his mistress soon after her arrival. It is impossible to come to any other conclusion, from the whole of his conduct, but that he anticipated the return of his mistress, and the exposure of the servant for the ill fare he had received from her.—*London Society.*

Salt.—Phosphoric Acid in Ashes.

To the Editor of the Canada Farmer:

SIR: In your number of July 15th I notice an extract from Johnstone's Lectures on Agricultural Chemistry on the value of salt as a manure. Some of our farmers in this section of the Province of Quebec have been using it latterly with great benefit to their grain crops, and in conjunction with animal manures there can be no doubt of its good effects, especially on dry soils.

From the same work I extract the analysis of the insoluble matter of birch-wood ashes, which is as follows:

Silica.....	5.50
Lime.....	52.20
Magnesia.....	3.00
Oxide of Iron.....	.50
Oxide of Manganese.....	3.50
Phosphoric Acid.....	4.30
Carbonic Acid.....	31.00
Carbon.....	
	100.00

For my own satisfaction I made some experiments to test the quantity of lime present in the ashes of the birch, and found the above substantially correct. The presence of phosphoric acid would show the value of these ashes as a manure for wheat, for Professor Dawson, in an address delivered in Montreal in the beginning of this year, conclusively showed how absolutely necessary to man's health and well-being it was that a certain quantity of this substance should be found in

the soil. If it requires, as he then showed, but four-tenths of one per cent. to supply wheat with the necessary quantity of phosphoric acid, here is at once a means, too often utterly wasted, of restoring to the soil a part of what has been extracted from it. The unleached ashes of course, from not being deprived of their potash, are more valuable than the leached, of which the above is the analysis.

Trusting the above may be of use to some of your readers, I forward it for insertion, if you think it worthy of a place in your columns.

August 6, 1868.

GOSFORD.

Our New Policemen.

They are wiry, spry little fellows, not so big as "Tom Thumb," but they are the most expert thief takers in the city. They are dressed in a neat uniform of gray and brown, each with feathers in his cap, and armed with a sharp instrument formed something like a pair of nippers, with which they seize marauders, and they seldom fail to make a capture when once they give chase. Our parks, especially, have for years been infested with hordes of lawless characters, that defaced the public ornaments, disgusted the people with their vile practices, and made themselves an intolerable nuisance. Scarcely a tree or shrub was left uninjured; the walks were disfigured, and passers in their vicinity seldom escaped being pounced upon by one or more of the uncleanly tribe. Many plans were tried to repel and destroy them. Cunning traps were set to catch them; poisonous mixtures were prepared to mix with their food, and rewards were given for their capture; still they seemed to thrive and increase. At last some one suggested that a family named Sparrow lived in England, noted for their success in dealing with such ugly customers, and some of them were induced to emigrate here and practice their profession. Their success is most gratifying. Those pests, the millers, moths, canker-worms, caterpillars measure-worms, etc., as these thieves were named, are rapidly disappearing, and the new policemen are petted by everybody. Commodious houses have been put up for them, the children divide their bread and cake with these friends, and by the help of these and other benefactors there is a prospect that the shade trees of our cities will hereafter be ornaments instead of *scorneries*. Now the next time you go out to try your skill as a

marksman, please don't murder any of our friends who are trying their hand at thief catching in your neighborhood. Otherwise may the whole brood of unclean and rapacious insects and vermin torment you by day and haunt you by night, until you are reclaimed from thoughtlessness and ingratitude.—*American Agriculturist*.

Old Corn for Hog-Feeding.

One of our leading agricultural journals says of feeding hogs, "begin with refuse grain, bran, and unsound corn, and finish off with old corn, if there be any on hand."

Now this "old corn" is the subject of our story. Why should we finish off with old corn and not with new? What virtue is in old corn that is wanting to the new? Is this grain like wine, that improves with age?—We do not mean to ridicule the idea. We have great respect for old notions, *prima facie*, and will not treat them with disrespect, unless we can prove them *dis*-respectable; and we confess, as regards this, we want the direct proof. It is a very well-settled fact that good, firm pork cannot be made of such ordinary slops as are fed to hogs, nor of pumpkins, turnips, cabbages, &c., and that corn is the best food for the purpose. But is it the quality of hardness in the corn that makes the meat firm, and therefore the harder the better, and therefore old corn better than new? Suppose we grind the old corn, how then! or suppose we soak it?

The dryness and hardness of old corn is a serious objection of itself, and it behooves those who maintain the superiority of old over new, to show in what it consists; or, if that cannot be done, to satisfy us by careful experiment that the fact is as they say. Do not let us hold on to this old notion because it is old.

There is another little matter we should like to have settled in this pork business.—Will pork, killed in the wrong time of the moon, "shrink in the pot." That is, if you kill on the decrease, will a big piece of meat, put in the pot, come out a small piece, and *vice versa*? A great many people practice upon this notion, who will not own that they believe in it? The writer engaged to sell a lot of pork, on one occasion, to a very intelligent gentleman, who requested that it might be killed when the moon was all right, remarking, with a smile, that the *ladies* thought it of some importance.

Whether swine's flesh is subject to this sort of lunacy we will not determine, but suggest that the matter be set at rest by a fair trial.

From the Country Gentleman.

Horticultural Memoranda.

THE CLARKE RASPBERRY.—Marketers state that this new and promising variety has sold the present season at from 60 to 75 cents per quart, while the Philadelphia brought only about 30 cents, or 40 cents at the most. The Clarke appears to be quite hardy, but is not quite so productive as the Philadelphia. It is said also to endure the hot weather of summer without injury.

POOR SOIL FOR BLACKBERRIES.—William Parry, one of the most intelligent and successful cultivators of the small fruits, stated before the New York Fruit-Growers' Club, that a neighbor of his, who had about forty acres devoted to blackberries, purchased a tract of light sandy soil at the low price of \$13 per acre, and planted it with them. But desiring to have a model patch, he bought a few acres of very rich land at \$300 per acre. The blackberries on this rich land made an enormous growth, but did not yield so much fruit per acre as the other. It is proper to remark, however, that the poor land had good culture, and we observe in another place that Mr. Parry applies large quantities of black muck along the wide trenches at planting time.

MAHALEB STOCKS AT THE WEST.—V. Aldrich, one of the best Illinois fruit-growers, in allusion to the late and rapid growth of the Mahaleb as a cherry stock, and its consequent liability to top-killing in winter, states that he succeeds well with it on high dry ground, not very rich, when there is no top-killing.

FINE EARLY STRAWBERRIES.—The Gardener's Monthly states that at one of the exhibitions of the Pennsylvania Horticultural Society, D. W. Herstine of Philadelphia, displayed a large basket of strawberries, "which delighted every one for their size and beauty," produced simply by covering the plants in the open ground with a common hot-bed frame, adding that Mr. H. had an abundance of fruit before the other plants in open ground were in blossom—the strawberries being much finer colored than under ordinary management.

BAD LUCK.—A "Disgusted Britisher," writing in an English journal, and quoted by the Gardener's Monthly, in speaking of the unfavorable character of America as a fruit-grow-

ing country, says one man had "a fine apple orchard, six years planted, when the field mice barked nearly every tree, and most of them died." This he ascribes to the severity of the American winters, which compelled the mice to resort to the trees for necessary food, and adds, after mentioning other cases, that the owners "were careful and tidy cultivators, and their mishaps came upon them through no neglect on their part." What would Oliver Chapin, who has one hundred acres of superb orchard, without a missing tree, and others equally successful, say to this statement? We never yet saw an orchard destroyed by mice, that was not more or less encumbered by weeds and grass, or had plenty of such growth near at hand, and even here, proper embanking, or a few terriers, would have prevented all the trouble. We knew one of these "careful and tidy cultivators," who planted an apple orchard in pasture ground, and after the wind had twisted a part of the trees about, and the cattle had browsed the rest, came to the grave conclusion than Providence had ordered that he should not have fruit, and he refused all other effort in planting.

FRUIT BASKET.—M. I. Dunlap of Illinois says an excellent fruit basket for peaches and the larger fruits is made in Michigan at thirteen cents per basket, holding a third of a bushel, composed of nine staves, four hoops and a head. It will stand wear and tear, and is a useful thing to the purchaser of the fruit after he has consumed its contents.

MARKETING PEACHES.—Those who have formerly been in the practice of purchasing peaches gathered when half ripe, and with their flavor less than half developed, will be glad to learn that it has now become fully established that fully ripe peaches (not soft) carry the best, and do not decay so soon as those in a half green state. Dr. Hull of Alton, Ill., an extensive fruit grower, stated at the St. Louis Pomological meeting that he had been shipping fruit to half-a-dozen different States, and that he has found that when fully mature, and packed tight enough to prevent all friction or rattling, they will "carry six days safely." He uses baskets only, placing oak leaves in the bottom and between layers. He objects strongly to poor railway accommodations, and recommends a better car for fruit conveyance.

The American Farmer.

Baltimore, October 1, 1868.

TERMS OF THE AMERICAN FARMER

SUBSCRIPTION TWO DOLLARS PER ANNUM.

RATES OF ADVERTISING:

Ten lines of small type constitute a square.

	1 Mo.	3 Mo.	6 Mo.	1 Year.
One Square.....	\$2.00	\$5.00	\$8.50	\$15.00
Half Column.....	8.50	20.00	35.00	60.00
Half Page.....	15.00	35.00	60.00	100.00
One Page.....	25.00	60.00	100.00	200.00

PUBLISHED BY

WORTHINGTON & LEWIS.

New Office, 4 South Street,

Near Baltimore Street,

BALTIMORE.

The late appearance of the *Farmer* this month is caused by unavoidable delay at the printing office.

Notice—The "American Farmer" for Three Months Gratis.

To every new subscriber beginning with January, 1869, we will send the "*Farmer*" for three months (October, November and December, '68) *gratis*. Those wishing to avail of this offer, must remit the amount of their year's subscription, \$2, by the first of January next.

Back Numbers of the "Farmer" Wanted.—Exchanges and subscribers having *January, February or September ('68)* numbers of the "*Farmer*" which they do not intend to preserve, will confer a favor upon us by returning them by mail to this office—our issues for those months having run short of the demand.

For each number so returned, we will send the "*Farmer*" three months, without charge, to the party returning it.

Stoves, Tin Ware, &c.—We call the attention of our friends to the advertisement of Mr. Charles Fisher. The good judgment which directs him to seek the very best country custom in the advertising pages of the *Farmer*, no doubt governs him in the management of his business, and we hope he will find himself well compensated by this notice.

Frederick County Agricultural Society.—We have received from John P. Derr, Esq., Chief Marshal of this Society, a kind invitation to be present, and a premium list, which may be seen at our office. The Annual Exhibition to be held on the 20th, 21st, 22d and 23d of the month.

The new and spacious grounds of the Society are handsomely laid out, and will have shedding and stabling for a large quantity of stock.

The trotting course, of about half a mile, has been carefully graded. Suitable buildings for the exhibition of articles pertaining to the household department are provided.

The premium list is a liberal one.

The chief officers of the Society are C. K. Thomas, President; H. C. Koehler, Secretary; Calvin Page, Treasurer; and John P. Derr, Chief Marshal.

The Frederick Union says: "Some of the finest horses in this country will, no doubt, display their speed over the track, as the prize of five hundred dollars for the fastest trotter, and of one hundred dollars for the fastest racker or pacer, will excite much competition and draw fine horses from all sections of the county."

As our State Society is to hold no exhibition, we hope the farmers of the State who have fine stock will avail themselves of the invitation of our Frederick friends, and join them in their praiseworthy endeavors to make this one of the best exhibitions ever held in the State.

The Farm Yard Fowls of all Countries.—Breeder and lovers of poultry will be interested in a new publication of Prang & Co., of Boston, a copy of which may be seen at our office. It is a collection on one sheet, for framing, of the best drawings that could be obtained of the best breeds of farm yard fowls raised in the civilized world, and colored in oil print.

The picture is a chromo-lithograph, and will be found an admirable accompaniment to every poultry book, representing, as it does in beautiful style, more than twenty-five varieties of the best fowls, at the low price of \$2 per copy.

Messrs. Prang & Co. are doing a large business in chromo-lithography, and reproducing in oil, by this art, the superb cattle pieces of Rosa Bonheur, and the paintings of other celebrated artists.

Baltimore and Ohio Railroad.

The interests of this great work are so closely allied with those of Baltimore and the State, that every report of its affairs commands attention. We learn from the Report of Proceedings of the Board in September, that it is intended to put upon the line betwixt Baltimore and Bremen, not later than April next, two additional, first class, iron steamers, of somewhat larger dimensions than the *Baltimore* and *Bremen*, with all the latest improvements, and President Garrett in a communication addressed to President Meier, of the North German Lloyds Company, expresses the belief that the immense facilities of the Baltimore and Ohio Railroad Company, combined with the palpable geographical advantages of Baltimore and its railways, and connections, cannot fail, at an early day, to lead to the use of *eight* steamers, between Baltimore and Bremen, instead of four.

In his address to the Board, President Garrett speaks as follows of the prospects of the road and its great connections:

"But, gentlemen, there is such a future before the Baltimore and Ohio Company and the city of Baltimore—such a present, indeed—pressing its vast business upon the road, that it becomes wise and proper, to anticipate a state of things that may require not a double track only for the approaches to Baltimore, but probably *four tracks*—and that contingency is the more probable with the rapidly improving relations of the Company through the Orange, Alexandria and Manassas road, and through the Valley of the Virginia with the South; through the Parkersburg Branch with the Southwest; through the Central Ohio with the Central West; through the Pittsburg and Connellsville road with the Northwest, and through the Washington county road with the Cumberland Valley of Pennsylvania.

Not in connection with the freshets on the Patapsco, but prior to that event, with a comprehensive view of these great interests, and the probable early requirements of increased facilities upon a road constantly becoming more national and important in its character and connections, it was deemed judicious to detail a corps of engineers to examine a line which would open an additional section of our own State, and which would furnish a *second double track* when required to Baltimore.

During the past season a route which would branch from the Metropolitan line near Gaithersburg, and extend to Laurel, has been examined. It has been ascertained that this route will be about four miles shorter to Baltimore, and that it affords other advantages. It may, therefore, become the policy of the company, when more urgent and pressing enterprises are accomplished, and as the traffic develops, to build that line as an additional route for the vast business between the South, Southwest, West and Northwest and Baltimore.

The work upon the heaviest sections of the Metropolitan Branch, in accordance with the fixed policy of this company, is progressing satisfactorily. As soon as the more difficult work is in a sufficient state of forwardness to enable the company, by throwing a suitable force upon those portions of that line, which will require a relatively brief time to construct, the entire work will be prosecuted to completion as rapidly as it can be judiciously effected."

A Twenty-nine Pound Fleecce!—We have long ago lost all interest in statements of the weight of fleeces, reported by great sheep growers, because we have not the least idea how much of such fleeces we may count for wool, and how much for stones, dirt, grease, and other doctoring stuff mixed with it.

Simple minded people estimate a fleece by the wool; but an impression has been made on our minds, that the most distinguished raisers of fashionable sheep are those who can get up a fleece that is capable of containing, and does contain, the most of something that is not wool. Will some one who knows tell us if we are wrong, and tell us particularly, when a gentleman reports the fleece of a year's growth, as weighing twenty-nine pounds, what he means by it.

Mr. D. H. Stone, of Genesee county, Mich., recently sheared a three years old Merino ram, the fleece of which weighed 29 pounds, fleece one year and one week old.

Northwood Female School, Charlottesville, Va., Dr. D. C. T. Davis, Principal. In calling attention to the advertisement of Dr. Davis, we may add, that we have, from a source entitled to great respect, the highest commendation of this school.

Feeding with Profit.

In feeding stock, as in feeding the land, judgment and good management are required. If any one supposes that he may resort to a system of temporary stuffing as a substitute for constant attention and regular feeding through the year, let him learn at once his mistake. Nor will feeding alone be sufficient, even if prudently attended to, unless cleanliness, and ventilation, and all the circumstances that conduce to the animal's comfort and well being be looked after.

"Pigs," says an English paper, "enjoy the reputation of having a real liking for dirt, and certainly the way which they are kept on some farms would show that their owners are determined to give them ample opportunities for carrying out this liking. No notion can, however, be more erroneous than this, as none is certainly so productive of loss to the keeper. Let any one not convinced of this, try the two modes of keeping—the dirt and the clean—the food in both cases, and other general treatment being the same, and the result will show him which of the two is best in the end."

So that besides good and regular feeding, pigs must be kept clean, notwithstanding their reputation for love of filth—a reputation which is misunderstood, as any one might know who would observe their cleanly habits when they have room enough allowed them.

Then, a great deal depends on the mode in which they are housed, to have them feed profitably. A careful manager adopts this method. A large outhouse is enclosed at the two sides, so as to be warm and dry—the floor is paved, and sprinkled over with burnt clay, and ashes obtained by burning weeds. In this the pigs are fed; while for resting and sleeping they have a compartment railed off at the other end, and which is amply provided with clean straw.

Straw, if allowed to get damp and mouldy, is very apt to engender mange or skin disease, but treated as above the straw is kept dry, and enables the animal to keep his skin thoroughly clean. The manner in which he is housed gives him comfort, cleanliness, fresh air, and every necessary condition for his well doing. As to the feeding, the same care which looks to the animal's comfort in other respects, will see that he is not half starved through a portion of his existence and then stuffed for the rest.

The most profitable feeding is that which is fairly distributed through his whole life. He must be well and abundantly fed with good food so that he may grow and fatten continually, and make the best use of every day he lives. It is a mistake to suppose that very abundant feeding is necessary to keep up this steady, continual growth. The same quantity of rich and fattening food is used much more advantageously given in moderate quantities through a longer period of time.

It has been especially remarked of beef cattle, by the most experienced feeders, that any attempt to force, by extravagant feeding, is so much waste of food. A feeder who practiced careful weighing of his fattening cattle every week, found that a daily supply of four quarts of barley meal to a fine steer gave a weekly increase in weight, averaging eighteen pounds. A neighbor advised him to *push* him, and eight quarts were accordingly fed daily. The weekly increase of flesh was less than when he received four quarts. The amount being increased to twelve quarts per day, he gained nothing at all. This is not a solitary case, for it is sustained by the experience of intelligent feeders, that a moderate supply of food, given at stated regular periods, is much more productive of flesh and fat than attempts at quick feeding with excessive supplies. The philosophy of it is, that in this case a large portion of the food passes undigested, and the organs, from being over taxed, may become incapable of digesting enough for the proper nourishment of the animal.

Let it not be supposed, then, that for land or animals extravagant expenditure can be substituted for careful, every day management.

♦♦♦
 "Lightning Apple Parer."—We call attention to the advertisement of this very serviceable and efficient little implement. We have one in our office, and on trial it seems to verify the high commendation it has received from such sources as the St. Nicholas and Metropolitan hotels, and to justify the premiums it has received as the best parer known. Read carefully the advertisement.

♦♦♦
 The Adams Co. Agricultural Society of Pa. held its Annual Exhibition, beginning on the 22d September. H. J. Stahle, Esq., Corresponding Secretary, has our thanks for a complimentary ticket.

Composition of Leaves.

Where there is any deficiency of material to make composts, or to litter stock, it is well that cultivators should know the value of leaves, which very often abound and are wasted. Old gardeners know well the value of leafy mould when well decomposed in their composts. With them, observation has determined the matter. The chemists looking still more closely into the composition of things, teach us why leaves are beneficial in the operations of florists and vegetable growers, and also to cultivators of every description. It is because they are themselves a compound of the very elements which most commonly enter into the constitution of growing plants.

The elements found in the ash of the foliage of a fruit tree plucked in spring, soon after blooming, were as follows:

Carbonic acid.....	11.560
Silicic acid.....	1.750
Phosphates.....	25.050
Lime.....	4.715
Magnesia.....	4.500
Potash.....	18.950
Soda.....	15.190
	<hr/> 81.715

The remainder of the 100 parts being made up of sulphuric and other acids, not determined.

It is found, too, that leaves of the same tree will contain more mineral matter when matured in the fall, than in the spring. Also that leaves contain a larger proportion of mineral matter than the twigs and small branches, and these, than the solid wood of the trunk.

In the matured foliage of the American elm upwards of 11 per cent. of earthy matter (ashes) may be found, while the solid wood contains less than 2 per cent.; the leaves of the willow more than 8 per cent., while the wood has only 0.44; those of the beech 6.67, the wood only 0.35; those of the European oak 4.06, the wood only 0.22; those of the pitch pine 3.13, the wood only 0.27 per cent.

From this it is seen that in a forest growth a very large amount of the mineral elements taken into the circulation of trees is held by the leaves, and returned to the soil. This accounts for the fact that such lands, undisturbed, not only maintain but increase their fertility from year to year, while bearing very heavy growths of wood. While they annually receive back the greatest portion of the

mineral constituents of the trees, they get with them a considerable quantity of organized matter derived from the atmosphere.

This same combination of materials which maintains and increases the growth of great forests will increase as much the growth of crops, if properly applied. They decompose slowly, and therefore if not prepared in advance, their influence upon crops will not be very prompt. But used for bedding and littering stock, and submitted to fermentation in a compost heap, nothing is more suitable for any purposes, whether of garden or field. Their usefulness depends upon the combination of elements, all of which are available to plants commonly cultivated, and in such proportions as are most desirable. Nothing is needed to put them in the best state of preparation but the decomposition above suggested.

An experienced fruit-grower in Maryland thinks an application of leaves to fruit trees, year after year, and without any preparation, the best manure that can be given them. He puts them about the bodies of his trees, throwing on earth enough to prevent their blowing off. If they do not act effectively as a fertilizer the first year, they perform the valuable office of a mulch. They preserve moisture, afford a harbor for a thousand perishing insects, keep the surface loose, and in the course of a year make the compost most needed, while a fresh application on the surface takes its place as a mulch, and passes through a like process.

American Wine.

We have received from Mr. Frank Lewis, No. 4 South street, the agent in Baltimore of the American Wine Company, St. Louis, Mo., a bottle of Imperial Champagne manufactured by that company from the first crushing of Missouri grapes.

We do not pretend to be knowing enough in the quality of wines to pronounce upon the character of this, but we believe it to be, what is claimed for it, a pure grape wine, and worthy of the attention of those who want a wine of that character. Besides the champagne, there are the Missouri Catawba, Virginia Seedling and Burgundy. We hope Mr. Lewis will be successful in introducing them into the Baltimore market, and that they will take the place of some of the chemical mixtures which are sold for wine.

Learn Your Business and Mind Your Business.

To "go ahead," is a good motto in action, but very unsafe unless you are "sure you're right." The motto of a good farmer should be therefore, first *learn* your business and then mind it.

Among ambitious young farmers, and older ones, who have recently begun to farm with more of zeal than knowledge, there is often great waste of energy and means for want of sound judgment and discretion in the use of all the necessary help to productive farming. These are always advocates of high farming, and are diligent readers of agricultural journals and books, but too often, unfortunately, bring discredit upon scientific farming by a failure in the application of their knowledge. Their need is that sound judgment which duly appreciates all the means and appliances of improvement, together with the skill in their use, which only results from experience. The farmer who is trained and educated for his work, and understands his business as he should, need have little fear of spending too much money in farming. He is emphatically the man who can make high farming pay the highest rates of interest. Unfortunately it is such men, generally, who are over cautious, and afraid to trust themselves in liberal expenditures.

What zealous young farmers should ever bear in mind, is that it is not expensive manuring alone, nor thorough cultivation alone, nor drainage, nor any other one or two things combined, that can ensure success, but knowledge of and thorough training to their business, and then, enlightened, courageous and liberal expenditure. Such expenditure would embrace all the processes necessary to productive cropping, and permanent improvement of the land. This we call "high farming." It is that sort of farming which has always been most productive of results in able hands, and will be especially so in the future of Maryland and Southern State agriculture. If it fail, it will not be that the system is wrong, but because of want of skill in its application.

Let the young farmer know then, that, first, he must learn his business. He must study its theory, and he must be trained in its practice. He must learn what modern science teaches of its principles, but he must not suppose that that alone is agricultural educa-

tion. He must also make himself familiar with all the processes of the art, by years of training, and taking hold with his own hands. This is the price paid for skill and sound judgment in the prosecution of any valuable pursuit, and it is a price which will yield large interest when applied to agriculture. The misfortune has been that whereas this training is acknowledged to be necessary in every other branch of business, everybody thinks he can farm without learning.

Assuming that the farmer has *learned* to farm, we would encourage him to the utmost in a free use of the means of increasing his crops and improving his lands. We are glad always to show what may be done by what has been done, but unfortunately there are very few of those who have used the means of improvement, who have kept careful accounts of their expenditures, or have furnished them for publication. We give one example which happens to have come to our knowledge, to show that this kind of expenditure will *pay* well; for that is the test of its value.

The land in the case mentioned was such as would bring in Maryland, away from cities, or the neighborhood of towns, twenty-five dollars per acre, and would average four barrels of corn to the acre or five bushels of wheat. After the expenditure incurred as below the crop of corn yielded twelve barrels per acre, and one and a-half tons of hay per acre, averaging these through a rotation of six years.

The figures below represent the expense for manures and the return in crops, at prices existing before the war.

The manures used, it will be observed, had the help of two improving crops—a crop of field peas, sown the year after the corn and just preceding the wheat, and the clover crop sown upon the wheat, with other grass seeds:

Fifty bushels of fresh lime per acre.....	\$5 00
Twenty bushels bone dust.....	13 40
Three hundred pounds of guano.....	7 50
Two bushels seed peas.....	3 00
Grass seeds.....	8 00

Total cost per acre..... \$33 50

To offset this expenditure there was the increase of corn, eight barrels per acre.....	\$24 00
Increase of wheat, 30 bushels per acre.....	45 00
Increase of hay, one ton per acre, through three years, three tons.....	45 00

Total increase per acre..... \$114 00

This would make the increase of crop through the six years \$80 in excess of expenditures, or \$13 41 annual increase per acre

after paying all expense, and leaving the land permanently improved to a degree corresponding with this high rate of production.

Questions of Pasturage.

There are several points of interest as to the pasturage of cattle, which need to be occasionally called to mind, because while they are of importance, they are points on which even intelligent men do not agree.

First, as to the proper time of turning out cattle to grass. The common argument is that the new grass is poor and watery; that it purges and weakens the stock, when they need, especially, to be strengthened. Early feeding is therefore objected to as positively injurious, and a strong argument in favor of the contrary practice is the increased quantity of manure saved by keeping them longer in the stalls and yards. There is nevertheless very strong testimony in favor of turning to grass as soon as a bite is afforded, and it is hardly possible, indeed, to get for stock of any sort the full benefit of a season's growth, without taking it from the start. Should they be in poor condition when turned out they must not be allowed to go where there is danger of being mired, for an accident of that sort is very apt to be fatal.

As to change of pasture ground, the general opinion favors an occasional, if not frequent change. Yet it is alleged by experienced dairymen that cows are more contented and do better through the season when not changed from one field to another, unless from a day to a night pasture; or that they do better to range at will during the day over the whole pasturage of the farm.

In the report of a discussion at the annual meeting of the State Society of Ohio a large majority of the graziers present thought that stock should not be changed from one pasture to another; that if a farmer has one hundred acres of pasture the division fences should be thrown down. One member asserted that "cattle would fatten better when confined to one pasture;" another preferred "one pasture, without change;" another that "for cheese there should be no change—it always diminishes the curd;" another thought "a large range best;" another "pastures all his stock in one field;" another thought that "in a blue-grass pasture a large range was best, but doubted about this in clover or timothy."

For increasing milk one thought "changing

pastures an advantage;" another that "frequent changes are best for milk, but would have no change for making beef." A grazier who fed forty to fifty head of cattle "fed off his blue-grass early in spring, and then put his cattle on timothy and clover, when the latter began to spring; sold his cattle fat in June, and saved his blue-grass till fall.

The question of shade trees in pasture grounds, is one which we should suppose would hardly admit of discussion, yet we find the propriety of it stoutly denied. One member "regarded shade trees in a pasture as a nuisance—the cattle would lie under them until drawn out by hunger." Another concurred in this opinion, and added that "cattle grazed in the sun make better and more solid fat, which weighs more, and stands driving better. Flies annoy cattle more in the shade than in the sun." Several members thought shade trees an advantage. One, though "admitting that more beef could be made in the sun without shade, would favor trees as more humane to the animals."

We confess that we concur in this last view, partially, and can but think that what is most humane, that is, what tends most to the comfort of the animal, tends most also to profit, and that the instinct of the beast is the best test of what is agreeable to him.

Circular of Maryland College of Pharmacy, Session of 1868-69.—We are indebted for the above circular to our friend, Mr. N. Hynson Jennings, No. 90 N. Charles street, one of the Board of Examiners, and would recommend to young men contemplating either Pharmacy or Medicine as a profession, to send for circular. Address J. M. Worthington, care of N. Hynson Jennings & Co., 90 N. Charles street.

State Fair, Madison, Wisconsin.—We are favored by J. W. Hoyt, Esq., Secretary Wisconsin State Agricultural Society, with complimentary tickets to the State Fair, beginning September 28th.

A farmer in Derbyshire, England, recently took a prize at a fair on three cabbages that averaged 72½ pounds.

The *Ohio Farmer* asserts that nine-tenths of the foot and ankle ailments of the horse are traceable to standing on dry plank floors.

Book Table.

Blackwood's Edinburgh Magazine.—We are in receipt of *Blackwood* for August—the reprint of the Leonard Scott Publishing Company, 140 Fulton street, N. York. The contents of the number are: The Right Honorable Benjamin Disraeli. The Odes of Horace—continued. Recit D'Une Seur. How Frank Thornton was Cured. Letters from a Staff Officer with the Abyssinian Expedition—Part III. Historical Sketches of the Reign of George II—No. V. The Poet. Cornelius O'Dowd.

A Guide to the Study of Insects, and a Treatise on those Injurious and Beneficial to Crops.—For the use of colleges, Farm Schools, and Agriculturists. By A. S. Packard, Jr., M. D. Salem. Press of the Essex Institute. Part II., July 1868. Price 50 cents.

The second part of this valuable work is now before us, and we desire again to recommend it cordially to the attention of our readers.

First Class Book of History—designed for pupils commencing the study of history—by M. J. Kerney, A. M., author of *Compendium of Ancient and Modern History*—22d revised edition.

We are indebted to the publishers, our townsmen, John Murphy & Co., for a copy of this little work, which seems very well adapted to beginners in history. It embraces a good outline of Ancient and Modern History, sufficient to give the young pupil a general idea, without burdening his memory too much with detail, in the first years of his study of this important branch of industry.

The American Entomologist.—We have received the first number of the monthly bearing the above title. It is published by R. P. Studley & Co., 104 Olive street, St. Louis, at \$1 per annum, and edited by Benj. D. Walsh and Charles V. Riley, the former State entomologist of Illinois, and the latter of Missouri.

How Crops Grow.—This is the title of a work by Prof. Samuel W. Johnson, of the Sheffield Scientific School of Yale College, just issued by Orange Judd & Co., 245 Broadway New York, received too late for further notice this month.

The Home Monthly, devoted to *Literature and Religion*. A. B. Stark, editor, Nashville, Tenn. Printed at the Southern Methodist Publishing House. This is a Southern magazine, and one of the handsomest and best in the country. The contents of the September number are very attractive. The editor urges his subscribers to aid him in the circulation of the *Home Monthly*, saying: "Do your neighbour a kindness by persuading her to take a good Southern magazine, instead of the vile, corrupting periodicals found in so many christian families."

The Galaxy for October is one of the best numbers of this able and handsomely printed magazine. The first part of "Cipher," a novel, is given; "Vittoria Colonna;" "Hazard," a story; "The History of Tears;" "A few words about the Nerves," the very interesting story, "Beachdale," continued, and a great deal of other agreeable reading.

The New Eclectic for October is fully up to the high standard it has maintained throughout its course. It is an admirable selection of "amusing and instructive matter selected from all the contemporary periodicals of the world." Address *New Eclectic*, No. 49 Lexington street, Baltimore.

The Farmer's Gazette and Industrial Index.—We have the third number of this new enterprise of our friend, Col. S. Bassett French, Richmond, and have read it through and through without stopping. It is good—very good, and we heartily commend it to all good people. The "Turf, Field and Farm" says of it, "the third number has one article—that on sheep husbandry—worth three times the subscription price of the *Gazette*" Price \$1, strictly in advance.

University of Maryland.—We are indebted to Dr. Frank Donaldson, Professor of Physiology, Hygiene, and General Pathology, for a copy of the Sixty-first Annual Circular of the School of Medicine—session 1868-69 of this time-honored institution. The venerable Nathan R. Smith, M. D., as Professor of Surgery, heads the list of the very able Faculty. The session opens on the 19th of October.

Iron ox-bows, three-quarters of an inch in diameter, are recommended as being superior to wooden ones.

Baltimore and Potomac Railroad.

The annual meeting of the stockholders of the Baltimore and Potomac Railroad, convened at the Court House in Upper Marlborough, on Wednesday, September 2d.

President Bowie, in his report, speaks of the hopeful progress of the affairs of the road, and says the immediate completion of the whole line to the Potomac is beyond a peradventure. The route of the road through Charles county has not been definitely settled, the point in dispute being, whether to build the road to the Potomac river opposite Aquia creek, or to strike the river above, and connect with the Richmond and Fredericksburg road, by a line on the Virginia side.

The Baltimore Daily Gazette, noticing the report of the President of the company says:

"To penetrate with a railroad such a region as this, is like unsealing the resources of a remote country. In all that large district bounded by the Patuxent river on the one side, the Washington Branch of the Baltimore and Ohio Railroad on the other, and the Potomac river on the third, there has never, until now, been anything that offered better facilities to a market than a network of country roads, frequently impassable in the winter season, and the water ways of the Patuxent and the Potomac rivers. Yet there are no more productive lands in the State than are to be found in 'the Forest' of Prince George's, and in some portions of Charles and St. Mary's counties. Nor is there any region within what is soon, we hope, to become within easy reach of the city of Baltimore, which is better adapted to the growth of tobacco and the cereals. The one great need of the counties through which it has been determined the Baltimore and Potomac Railroad shall pass, is facility of access and cheap transportation to a market. When these are once obtained, the chief obstacle to the material prosperity of a portion of the State, which has at all times been eminently favored in other respects, will have been removed."

Early Rose Potato.—We call attention to the advertisement of this new seedling, which, from the reports we have of it, is ten days earlier than the Goodrich, of better quality and very productive. We have no personal knowledge of it, but speak on the authority of editors of the leading agricultural journals of the North.

"*The Border Agricultural Society of Virginia and North Carolina.*"—This Society is advertised to hold its next Annual Exhibition at Danville, Va., beginning on Tuesday, Oct. 20th, and will be well attended, we hope, by exhibitors and visitors. A committee of the Society, composed of Messrs. Wm. T. Sutherland, Thos. P. Atkinson and Geo. Williamson, have issued an excellent address in behalf of the purposes of the Society, from which we make the following extract:

"We would caution you, fellow-citizens, against a desponding spirit—yield not to that feeling of despair so natural to persons in your down-trodden and suffering condition; but *look forward*, in anticipation of a brighter and a happier day.

We know the difficulty of persuading men in your circumstances to *struggle on in hope.*

'We hardly value Hope that bids us *strive*,
Yet hope's the child of Faith, and Faith makes thrive.
Each *working soul* that works" in earnest.

Then let us work in earnest to retrieve our fallen fortunes. Let us endeavor, by industry, economy and a careful observation of the system of management adopted by others, to regain all that we have lost, and even to become more prosperous than ever before.

The experience of the last two years must have convinced all, that there can be no profitable culture of the earth in the Southern States, without a thorough and complete change of our system of agriculture. *Old customs and old systems must give place to new, and we must adapt ourselves to our changed condition—we must be progressive.* We must learn the important truth that as iron muscles require neither food nor clothing and demand lower wages, inasmuch as one man with them can do the work of five without them, we must introduce and use upon our farms, all those labor-saving machines which the experience of others may recommend and our judgment shall approve—thus dispensing with all unnecessary and extra labor.

We must wisely adapt our crops to our different soils and our manures to our crops. We must introduce the culture of other crops than we have been accustomed to grow, thus diversifying the productions of our farms and so making them more profitable.

In short, we must resort to every expedient to make those productions exceed in value the cost of cultivation and the amount of capital invested."

Death of Dr. G. H. Dadd, V. S.—We greatly regret the necessity of announcing the very unexpected death of Dr. Dadd, so widely and favorably known as a veterinary surgeon.

The valuable essay on "Colic and Bots in Horses" begun in April and continued in several successive numbers of the *American Farmer* was, perhaps, his last contribution to his profession. The following notice of his death we take from the *Prairie Farmer*, Chicago:

"This well known veterinary surgeon died last week, in the city of Baltimore, from a disease resulting, it is thought, from a cold contracted during the recent freshet in that city. Scarcely past the prime of life, Dr. Dadd was a hale, hearty man, and his death came unexpectedly to his family and friends. The Doctor has written more pertaining to his profession than any man in this country, and his books, some of which have passed through several editions, are to be found on the shelves of most farmer's libraries. Several years ago he commenced the publication of the *Veterinary Journal*, which, for want of adequate support, was soon discontinued. After this he became a frequent contributor to the agricultural journals of the country, and was, for some time, veterinary editor of *Prairie Farmer*. He was well known as a practitioner, in Boston, Cincinnati, St. Louis, Chicago and Baltimore, in each of which cities he at different times resided. His remains were brought to this city for interment, the funeral ceremonies taking place at the residence of his daughter, on Jackson street, on Sunday last."

Diseases among Horses and Cattle in Maryland.—We regret to hear of the prevalence of an epidemic, among horses in Talbot, Dorchester, and other counties of the State resulting in very serious losses. *The Easton Star* of a late date has the following:

"THE HORSE EPIDEMIC.—We noticed last week the fatal epidemic prevailing among the horses of Trappe district. We learn that the disease also prevails in Dorchester county. Not less than thirty horses have died of the disease in Trappe district. The Messrs. Hugglett have lost a number. Mr. Samuel Dickenson has had six horses attacked with it, two or three of which have died. Mr. Flannigan, Mr. Bowdle, Mr. Valliant and Rev. Mr. Preston have each lost one or more horses. Mr. Dickenson has renovated his stables, and is

using chloride of lime liberally as a disinfectant, and physicing his horses that have not yet been as a preventive, with what success remains to be seen."

The Centreville Observer, Queen Ann's Co., gives the following account of a disease among the cattle in that county:

"CATTLE DISEASE.—We learn that there are a number of cattle in this county suffering from a disease similar to that of hog cholera. Captain John Friel has two so affected. Mr. Wm. D. Keating has just cured one of his of the same disease. It is supposed that the disease is contracted by their being allowed to run out at night."

Sweetening Action of Lime.—W. G., a correspondent of the *Germantown Telegraph*, says: "There are few weeds more troublesome than sorrel, or more difficult to eradicate. Experience, however, seems to show that marling or liming in a proper way or in sufficient quantity, will destroy the pest, and prevent its future development. The growth of sorrel is the result of acidity in the soil, and lime, by its alkaliescent and sweetening action, tends to neutralise and correct it."

We suppose that the growth of sorrel is no more "the result of acidity in the soil," than the growth of gooseberries or currants, sour apples or sour cherries, and no more to be destroyed by the "alkaliescent and sweetening action of lime" than these fruits are to have their quality of sourness neutralised in the same way.

Lime is a valuable improver in Pennsylvania and elsewhere, and with the good cultivation which usually accompanies the use of it, is almost sure to give such predominance to a better growth of plants, as overwhelms and drives out the sorrel. The same result, we think experience will show, follows any other equally effective treatment of the soil. Whatever it needs most to bring it to, what we understand to be, a thoroughly good condition—whether lime, or stable manure, or clover and plaster, or even drainage alone, will, with good cultivation, most surely drive out sorrel, and many other like pests.

Montgomery County Agricultural Society.—The first exhibition of the reorganized Society of Montgomery county took place at too late a day in the month of September to allow a notice of it in this number.

Editorial Responsibility.

The *Massachusetts Ploughman* gives the following extract from our columns of August number, with its own comments as follows:

"Very respectable agricultural journals publish continually, most atrocious calumnies against the Southern people, gathered out of the very gutters of partizan politics; and the most melancholy and hopeless feature of the evil, is that the people who publish them seem actually given over to believe them true. They are told without passion, or, so far as we know, any other temptation—in the cool and quiet columns of journals pledged, we should presume, to all the ways of peace.

In the *Massachusetts Ploughman*, published at Boston, is a letter dated June the 1st, from the town of Peabody, in that State, from which we make the following extract: "My advice, sincerely given to every New Englander is, to keep out of Florida; her taxes will soon eat up her lands; her Secesh will become humble through their poverty, and will not wish to impale her laborers' heads on stakes at the cross roads." A cool, serious, sincere slanderer, is this man, and pious enough, no doubt, to thank God daily, that he is "not as other men are." That the Florida "Secesh" have heretofore habitually impaled the heads of their laborers on stakes at the cross roads, is in the mind of the writer a fact so well established, that it is not worth while to assert it in positive terms.—*American Farmer*.

That a journal is always supposed to endorse the doctrines of its correspondents or even "given over to believe them true," is a fact entirely new to us. We admit letters and communications and discussions to our columns, pro and con, without comment as to our faith in the writers or their views. This custom we believe is the one almost invariably followed by editors, and the above paragraph in the *Farmer* would not have attracted our notice did it not place us in a very unfair and unjust position. It is well known to our readers, that for several months past two correspondents, in different sections of the country, have written letters for our columns in which a spice of controversy occasionally appeared; we admit the letters of both without comment or endorsement of either, as we should those of writers on almost any other subject appropriate to our journal. But that we have in

any way shown that we have exhibited any feeling, or have shown that we possess any prejudices such as the *Farmer* ascribes to us, we most emphatically deny. On the contrary, we have, on all occasions, done everything in our power editorially to establish the best possible feeling between the different sections of the country, and we are persuaded, that if our friend will glance over our files, he will acknowledge that he has done us an injustice. *Mass. Ploughman*.

The above reached us in the issue of the *Ploughman* of August 22d, too late for notice last month. We have to say in reply, that we had no intention of making a charge against the *Ploughman* especially, or to do the least injustice, and are willing to accord our contemporary all he claims when he says: "We have on all occasions, done every thing in our power editorially to establish the best possible feeling between the different sections of the country." We have certainly no recollection to the contrary of what is here asserted. We respectfully submit, however, that he claims too much in his attempt to free himself from the responsibility of publishing a libel. The wretch who at once jeers at the poverty of a stricken people, and defames them, we should class at once with the thieves who followed the Northern armies at safe distances, and satisfied their patriotism by fattening their filthy carcasses. Such people can but hate those whom they made haste to plunder as soon as they ceased to fear. Their slanders do little harm till they find utterance through the respectable columns of such a journal as the *Ploughman*, and go unrebuked to the sons and daughters of a thousand country households, to abuse their minds and poison their hearts against Southern people. Then an evil is done that we know not how to estimate—the evil that hundreds of Northern journals—political papers—are doing continually. It is in vain that editors say they are not responsible for what their correspondents write. The harm done is mainly, almost exclusively, their doing.—*Eds. Am. Fur.*

✂ A writer in the *Journal of Chemistry* says that a ton of tobacco exhausts the soil as much as fourteen tons of wheat or fifteen tons of corn.

The *American Farmer* thinks that this "writer" doesn't know what he is talking about, and that the *Journal of Chemistry* ought to have told him so.

Agricultural Society of Shelby County, Tenn.
—We have been kindly furnished by the Corresponding Secretary, John M. Brooks, Esq., with a copy of proceedings of a meeting held at *White's Station*, Shelby county, Tenn., for the purpose of organizing an Agricultural Society. A constitution was adopted, and the following officers elected in accordance with its provisions: President, A. B. Haynes; Vice Presidents, G. M. Bartlett, G. C. Holmes and F. W. Royster; Recording Secretary, Colonel H. D. Greer; Treasurer, J. H. Goodlett, Esq.; Corresponding Secretary, J. M. Brooks. The following Executive Committee were elected by acclamation: M. D. L. Stewart, A. J. Hayes. Mrs. M. D. L. Stewart being the only lady who had favored the meeting with her presence, was, by acclamation, elected an honorary member of the Society.

The names of the members of this association have been furnished us also in compliance with the following resolution:

On motion of Major Nash, the following resolution was adopted:

Resolved, That the Corresponding Secretary be instructed to furnish a list of all the members of the Society, with their postoffice address, to each of the following agricultural papers: *Southern Cultivator*, Athens, Georgia; *American Farmer*, Baltimore, Maryland; and *Southern Farmer*, Memphis.

The Society of Shelby county has our best wishes for its prosperity. The spirit with which our Southern friends are moving in agricultural matters, shames the sloth of our Maryland people.

Emigration to Maryland.—The Department of Labor and Agriculture, of which Dr. W. S. McPherson is superintendent, and Luther M. Giddings, Esq., assistant superintendent, is actively engaged in obtaining employment for those foreign emigrants who select Maryland as their adopted home. Each vessel with emigrants, as it arrives, is boarded by Dr. F. W. Bogen, State agent and boarding officer in the above department, and through his exertions quite a fair per centage of all immigrants arriving are induced to remain in this State, and as the greater part of those so remaining proceed to the agricultural districts, where their services are most required, and, being tillers of the soil, they are destined to add materially to the wealth and general prosperity of the State. Of the 350 immi-

grants that arrived on the 18th instant, by the steamer *Baltimore*, Captain Voeckler, from Bremen, 54, or about 15 per cent. remained in Maryland. This is considered a fair percentage, but of the 214 who arrived by the Bremen bark *Anna*, Captain Meniers, on the 20th instant, the per centage reached a figure unprecedented—104 of the number, or nearly 47 per cent, remained in the State. A large proportion have relatives residing here and in other sections of Maryland. A number of them are possessed of some capital and desire to purchase property here. The principal portion of those not remaining here go West via Baltimore and Ohio railroad.

Successful Experiment.

It has been remarked that agricultural experimentalists, while they often benefit their neighborhoods, and sometimes a much wider circle, rarely reap themselves the reward of their labors and their trials. The truth is, that such experiments are usually costly, and always so if the experimenter be an enthusiast, with convictions running ahead of results. Again, the experiments occupy a long time, necessarily running through a number of years, involving with a failure, loss of time, as well as loss of means. Instances of this will occur to many in connection with the attempt to raise silk in this country. We have no allusion to the multicaulis fever, which was a mere speculation, but the silk growing proper. The earlier attempts at raising silk worms on a small scale were sufficiently successful to lead, in many cases, to very considerable investments in accommodations for worms. The business dragged on through a few years, and finally fell through, a signal failure.

So we remember that in the early period of the cotton culture in this country, it was supposed that it might be successfully grown in the mild climate of the Eastern Shore of Maryland. An enterprising agriculturist, with commendable caution, as he supposed, increased his crop by degrees, from year to year. He finally made a crop of thirty acres with great success. Encouraged thus, he purchased largely all necessary machinery in the way of gins, etc., and laid out a crop of seventy acres. This was planted in due time, and flourished through the growing season, but an untimely frost brought utter destruction, and this put an end to cotton culture in Maryland.

Such is the fate of experimentalists generally. But we may note a different result in a case we are familiar with, where the gain was remarkable to the author of it, and the practical value of the example may be very great. The experiment was not a very costly one, and may be easily imitated, and we should hope with good, if not equal success, on a great deal of our very poorest lands.

A farmer who had been educated with notions of high farming, that had been confirmed by years of observation, purchased a farm of about a hundred acres, very poor, indeed hopelessly so, to ordinary observers. Our friend believed, however, that the use of the right means, and enough of them, would effect his purpose, sooner or later, and as the farm was to be his future residence, and he had money at command, he determined to make the experiment, even if he found it a costly one. We will not detail the various operations to which he resorted, and by which he finally brought his land to a very high degree of productiveness. This was done not without cost certainly, though the outlay was amply repaid in the end. But we confine our remarks to the most unpromising part of the land, according to our common ideas of fertility. This was a field of blowing sand, so poor that the rye sown on it did not produce the seed the year that the improvement was begun.

Its poverty was still further illustrated the following year by a growth of common field (black eyed) peas, not exceeding six inches in height. This crop of peas was designed to be the basis of improvement, but we should expect little result from the small quantity of vegetable matter thus furnished. Nevertheless, with it was applied fifty bushels of fresh lime. After this twenty bushels of coarse-ground bones were put on, and a dressing of three hundred pounds of Peruvian guano, to produce a crop of wheat. It was sown at the same time with clover and grass seeds, which, after standing two years, was followed by corn. After this another crop of peas, with a moderate dressing of bones and guano, brought forty bushels of wheat to the acre. The land was from that time considered permanently improved, and ever since has brought highly profitable crops. All expenses were fully paid in five years' crops. There are thousands of acres of such land within twenty-five miles of Baltimore.

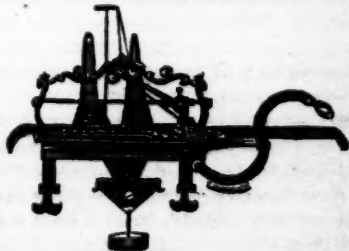
From our Correspondence.

CHARLESTON, S. C., Sept. 15, 1868.

GENTLEMEN: It is the ardent wish of a crippled lawyer—myself—to see my honest and healthy fellow-countrymen too busy with "*aratorical policy*" to engage in "*oratorical politics*." Would to God the Cincinnati of the South had remembered to impress upon their descendants the duty of living like the old Roman farmer, and warned them of the inherent destruction contained in the vicious system of trusting their agricultural operations to shrewd, subservient and illiterate overseers. Helpless in the hour of calamity, they must begin to learn their business at an age when they should be proficient and efficient professors of practical agriculture.

Without experience or money, some of our young gentry are exerting themselves, almost superhumanly, to repair the error of past vanity and superficial theology. Your magazine seems designed, more particularly to educate or advise congenial spirits in Virginia or your own State. If, without detriment to the characteristic nature of your publication, you could enlarge your area of consultation and information so as to embrace the farming operations and innovations necessary in the rich coast lands of South Carolina, you would be true preachers of sound comfort and plain righteousness to an impoverished and perplexed community.

The "Lamb Knitting Machine."



We would call the attention of our readers to the advertisement, in another column, of the "Lamb Knitting Machine." We believe it to be a good instrument, and one which will be used, sooner or later, in every family where any amount of knitting is done.

There are complaints of more than usual loss of lambs this season in New York.

"THE NEW ENGLAND FARMER."—The editor of the above named periodical has thought proper, during the very warm weather of July, to read us a lecture on the subject of crediting copied articles.

The article particularly referred to was "An Essay read before the Concord (Mass.) Farmers' Club, Nov. 14th, 1867, by Hon. John S. Keys, of Concord." We copied the essay into our May number, page 136, giving the proper credit as above stated. What claim has the New England Farmer to the paternity of that essay? It was not written for its columns. The reporter of any other paper could have taken it down as read, and published it. It became a public document. We never seen it in the New England Farmer, though it may be there; we copied from another paper, and gave the proper credit, as above stated.

We should not have noticed the unjust charges of the New England Farmer, had we not seen a "rehash" of them in the August number of "*The American Farmer*" of Baltimore.

We refer our editorial brethren to our May number, page 136, to show we gave the proper credit and made no claim to its paternity.—*American Stock Journal*.

We take pleasure in giving to the *Stock Journal* the opportunity to make the explanation, which the charge of the *New England Farmer* called for. We gave the extract from the latter only in illustration of what we had to say on a topic we thought proper to notice, as coming from the *Am. Agriculturist* in the way of accusation against Southern journals. We take no part in the discussion between our Northern contemporaries.

We would say, however, to the *Stock Journal*, that it is not the way of the *American Farmer*, either to "hash" or "rehash" what it finds in other journals. What it calls a "rehash" was a simple extract.—ED. AM. FAR.

It is just as easy to raise a bushel of good apples as a bushel of poor ones. What is a dollar or two of extra preliminary expenses in getting good trees?

The London Field says that washing a horse when in a sweating state is grateful and beneficial to the animal. When washed, wipe dry and blanket him.

For the "American Farmer."

An Old Statute—Cattle Fever in the South.

HALIFAX Co., N. C., Sept. 16, 1868.

MR. EDITOR: I think it a duty for every individual to do all in his power to disseminate valuable information. I notice that much is said in the papers about the Texan cattle disease. We have in this State an old statute, forbidding "to drive any cattle from those parts of this, or any other State where the soil is sandy, or the natural production, or growth of timber is the long-leaved pine, into or through any of the highland points of the State where the soil or growth of timber is of a different kind, between the first day of April and the first day of November." I have not the means to give you the date of its passage, but I think it is, at least, as early as A. D. 1756.

The statute has fallen into disuse, but, I believe, only because every observant resident recognized its propriety, and it was rarely violated. My experience justifies that propriety. Being anxious to improve my stock, I brought, in 1840, from Fauquier Co., Va., to this country a bull and two cows. The bull and one cow died within a few weeks, and, what is singular, my agent, in whom I had and still have great confidence, told me the surviving one had the ague and fever, as exhibited by the cold and hot stages, as plainly as he ever saw a man suffer with it. Since that time I have, upon several occasions, brought Devon cattle from Baltimore and Connecticut. I could not regulate the time of their shipments, and I have generally lost about half of them, after giving them all the care and attention in my power—owing to the fact that I could not make anybody believe that a calf would have a bilious remittent, or intermittent fever. There are well authenticated instances of monkeys having both.

If the notion upon which the old statute above quoted, is well founded, may not some regulation as to the time of the migrations of cattle from the Southwest be valuable?

It is estimated that there are 7,000,000 head of stock cattle in Texas. This is nearly ten to each man, woman and child of that territory.

A correspondent of the Irish Farmers' Gazette proposes the use of the microscope to determine the character of commercial fertilizers.

The Sale of Leaf Tobacco, by Sample, at Auction.

At the new auction room fitted up in tobacco warehouse, No. 5, South Charles street, for the sale of leaf tobacco, as provided by an act passed by the last Legislature, the offerings on Tuesday, Sept. 8th, amounted to about one hundred hogsheads. During the progress of the auction a large majority of the samples offered was withdrawn, in accordance with the seventh rule adopted by the Tobacco Association, which provides that "owners or their agents have the right to take in or withdraw any tobacco offered at public sale, provided it be done in a reasonable time after it is cried out."

The question was raised before the close of the sale as to whether the rule in question did not conflict with the law under which the association was operating, and upon the conclusion of the sale a meeting was organized to take the subject into consideration. G. O. Gorter, Esq., was called to the chair, and Mr. J. S. Gibbons selected as secretary. The law bearing upon the subject was read, which enacts that the tobacco offered is to be sold to the highest bidder, "the owner, or agent of such owner, being authorized to make one bid for the same, and when the highest bidder shall be other than said owner or his agent, it shall be entered as sold to such bidder." After some considerable discussion it was resolved to appoint a committee of five to take the subject into consideration, and to report the most feasible plan to be adopted by the association.

An adjourned meeting of the buyers and sellers of leaf tobacco was held Sept. 11th, at the Tobacco Exchange Salesroom, in warehouse No. 5, corner of Charles and Conway streets, with the president, G. O. Gorter, Esq., in the chair, and Mr. J. S. Gibbons, secretary. The committee appointed at the last meeting of the board to take into consideration the propriety of making a change in the seventh rule, which provides that "owners or their agents have the right to take in or withdraw any tobacco offered at public sale, provided it be done in a reasonable time after it is cried out," reported through their chairman, Col. James R. Herbert, that "hereafter the owner or his agent can make one bid, or say 'withdrawn' upon any hogshead of tobacco which he may offer, provided he does so prior to its being knocked down." The report was adopted and substituted for the seventh rule.

After the adjournment of the meeting the auctioneers, Messrs. A. S. Bonn and J. S. Morsell, proceeded with the regular sale of leaf tobacco. In consequence of the rules for selling not having been definitely settled upon until yesterday, the offerings were not very large. Samples of twenty-nine hogsheads were presented. The bidding was quite spirited, and the sales made satisfactory. In some instances the price paid was above the owner's bid. With the exception of a small lot of very common tobacco, the prices ranged from \$7 to \$22.50 per hundred pounds. All of the lots sold, amounting to seventeen hogsheads out of the twenty-nine offered, were of Maryland growth. The last lot, sold by Messrs. Herbert & Hairston and purchased by Messrs. W. A. Marburg & Brother at \$22.50 per hundred pounds, was of prime quality, as indicated by the price given.

Before the close of the sale the question was raised and decided in the affirmative as to whether tobacco inspected at other ports could be offered for sale at the Exchange without undergoing inspection in Baltimore.
—*Sun*.

FORCING FERTILIZERS.—Many farmers express themselves satisfied with barnyard manure, thinking that sufficient to meet the requirements of any crop; and in fact, they do not know that one crop differs from another in the quality of its fertilizing food. Barnyard manure is excellent, and, being home made, is the cheapest infallible resource of the farmer. But there are crops which require a stronger element added to it. In the majority of farm crops, the most fertilizing ingredients are phosphate of lime and potash. If farmers can be practically taught that with this intermixture of these two elements with their manure, any kind of crop can be made to pay back the cost in a ten fold ratio, thus enabling their home-made manure to go over a larger surface, a great and important result will be accomplished in the improvement of the agriculture of our country.—*Boston Cultivator*.

The Novel Machine Works in Chicago manufacture a machine horse-shovel, or scraper, which will load upon wheels a cubic yard of earth in one minute, and is an excellent street cleaner.

SUNDAY READING.

Nourish *thy soul* with good works. Give it peace in solitude. Get it strength in prayer. Make it wise with reading. Enlighten it by meditation. Make it tender with love. Sweeten it with humility. Humble it with patience. Enliven it with psalms and hymns, and comfort it with frequent reflections upon future glory. Keep it in the presence of God, and teach it to imitate those guardian angels, which, though they attend to human affairs, and to the lowest of mankind, yet "always behold the face of our Father which is in heaven."

Use sin as it will use you; spare it not, for it will not spare you; it is your murderer, and the murderer of the whole world. Use it, therefore, as a murderer should be used; kill it, before it kill you; and, though it bring you to the grave, as it did your Head, it shall not be able to keep you there. You love not death; love not the cause of death.

I remember Chrysostom, speaking of the loss of a soul, saith, that the loss of a member of the body is nothing to it; for, saith he, "if a man lose an eye, ear, hand, or foot, there is another to supply its wants." God hath not given us two souls, that, if one be lost, yet the other may be saved.

If you do a good action with trouble to yourself, the trouble passes away, the good survives. If you do evil with pleasure to yourself, the pleasure passes away, the evil survives.

Contemn riches, and thou shalt be rich; contemn glory, and thou shalt be glorious; contemn injuries, and thou shalt be a conqueror; contemn rest, and thou shalt gain rest; contemn earth, and thou shalt gain heaven.

Every day deny yourself some satisfaction; your eyes, objects of mere curiosity; your tongue, every thing that may feed vanity, or vent enmity; the palate, dainties; the ear, flattery; and whatever corrupts the heart; the body, ease and luxury.

He that rebukes a private fault openly, betrays it, rather than reproveth it.

When God is slow in giving, He only sets off His gifts to advantage, He does not withhold them. Blessings long desired are sweeter when they come; if soon given, they lose much of their value. God reserves for thee, that which he is slow to give thee, that you may learn to entertain a supreme desire and longing after it.

Tenderness of conscience is always to be distinguished from scrupulousness. The conscience cannot be kept too sensible and tender; but scrupulousness arises from bodily or mental infirmity, and discovers itself in a multitude of ridiculous, and superstitious, and painful feelings.

Esteem not thyself to have profited in religion, unless thou thinkest well of others, and meanly of thyself; therefore never accuse any but thyself; and he that diligently watches himself, will be willing to be silent concerning others.

You are effeminate, if your wish is to rejoice now with the world, and afterwards to reign with Christ.

The bond of wedlock is the closest of all bonds; it excels them, but dissolves them not. The Decalogue is younger than this institution. Husband and wife were before child and parent. Sinai must yield to Paradise.

The members of our body, in proportion as we have mortified them on earth, will shine the more bright in glory.

With God a publican goes beyond a pharisee; a sigh or a groan, that cannot be uttered, beyond a long prayer with ostentation. Care not how long, nor how loud, thy prayer be, but how hearty.

He that enjoys anything without an act of thanksgiving, is as one who robs the Almighty.

Never speak of any one's faults to others, till you have first spoken of them to the offender himself.

Nature teaches us to prize our lives above the world; and grace teaches us to prize our souls above our lives.

THE AMERICAN FARMER.

DAVIDSON'S THORNLESS RASPBERRY PLANTS,

For sale by the piece, dozen, hundred, or thousand.

For particulars, Address

JOHN GAGE & SON,
oct-31 Vineland, N. J.

Baltimore Markets, Sept. 26, 1868.

COFFEE.—Rio, 13a18½ cts. gold, according to quality; Laguayra 15½a16½ cts., and Java 22a23½ cts. gold.

COTTON.—We quote prices as follows, viz:

Grades.	Upland.	Gulf.
Ordinary.....	20 a—	00
Good do.....	22 a—	00
Low Middling.....	23 a23½	00
Middling.....	24 a27½	00

FERTILIZERS.—Peruvian Guano, \$84; California \$70; Rodunda Island, \$30; Patapasco Company's, \$60; Reese & Co's Soluble Pacific Guano, \$56; Navassa Guano, \$30; Chesapeake Guano, \$60; Flour of Bone, \$20; G. Ober's (Kettiewells) AA Manipulated, \$70; A do. \$60; Ammoniated Alkaline Phosphate, \$55; Alkaline Phos. \$45; Baltimore City Company's Fertilizer, \$40; do., Flour of Bone, \$60; do., Ground Bone, \$45; do., Poudrette, \$25; Baugh's Raw-bone Phosphate, \$56; Baugh's Chicago Bone Fertilizer, \$48; Baugh's Chicago Blood Manure, \$48; Maryland Powder of Bone, \$48; Rhodes' Super-Phosphate, \$50; Rhodes' Orchilla Guano, \$30; Lister's Bone Super-Phosphate \$55; Berger & Butz's Super-Phosphate of Lime, \$56; Andrew Coe's Super-Phosphate of Lime, \$60; Zell's Raw Bone Phosphate, \$56; Zell's Super-Phosphate of Lime, \$60—all per ton of 2,000 lbs.; Pure Ground Plaster, \$14.75 per ton, or \$2.25 per bbl. Shell Lime slaked, 6c., unslaked, 10c per bushel, at kilns.

FLOUR.—Howard Street Super, \$8.00a9.00; High Grades, \$10.50a11.50; Family, \$11.75a12.50; City Mills Super, \$8.00a9.00; Baltimore Family, \$15.00.

Rye Flour and Corn Meal.—Rye Flour, \$8.50a9.00; Corn Meal, \$5.75a6.00.

GRAIN.—Wheat.—Good to prime Red, \$2.25a2.45; White, \$2.30a2.50.

Rye.—\$1.40a1.65 per bushel.

Oats.—Heavy to light—ranging as to character from 60a75c. per bushel.

Corn.—White, \$1.08a1.20; Yellow, \$1.25a1.30 per bushel.

HAY AND STRAW.—Timothy \$18a20, and Rye Straw \$18 a\$20 per ton.

PROVISIONS.—Bacon.—Shoulders, 13½a13¾ cents; Sides, 16½a17 cts.; Hams, Baltimore, 20a23 cts. per lb.

SALT.—Liverpool Ground Alum, \$2.10a2.20; Fine, \$2.80 a\$3.00 per sack; Turk's Island, 50a55 cts. per bushel.

SEEDS.—Timothy \$3.75; Clover \$5.50a9.00; Flax \$2.75.

TOBACCO.—We give the range of prices as follows:

Maryland.

Frosted to common.....	\$4.00a 5.50
Sound common.....	6.00a 7.00
Middling.....	8.50a10.50
Good to fine brown.....	11.00a15.00
Fancy.....	17.00a30.00
Upper country.....	7.00a35.00
Ground leaves, new.....	4.00a13.00
Ohio.	
Inferior to good common.....	4.00a 6.00
Brown and greenish.....	7.00a 8.00
Medium to fine red and spangled.....	9.00a15.00
Fine spangled.....	15.00a25.00
Fine yellow and fancy.....	30.00a40.00

WOOL.—We quote: Unwashed, 32a34 cts.; Tub-washed, 48a52 cts.; Bulled 28a35 cts.; Fleece 48a46 cts. per lb.

CATTLE MARKET.—Common, \$4.75a5.50; Good to fair, \$6.00a6.50; Prime Beeves, \$7.00a8.25 per 100 lbs.

Sheep.—Fair to good sheared, 4a5½ cts. per lb., gross.

Hogs.—\$11.50a15.00 per 100 lbs., net.

Wholesale Produce Market.

Prepared for the American Farmer by HENRY W. WARNER, Produce and Commission Merchant, 18 Commerce street.

BALTIMORE, Sept. 30, 1868.

BUTTER.—Western solid packed 40a45 cts.; Roll none; Glades, 35a38; Goshen, 50a55.
BEEFWAX—41a44 cts.
CHEESE.—Eastern, 17½a18; Western, 16½a17.
DRIED FRUIT.—Apples, 8a12; Peaches, 10a15.
EGGS.—47 cents per dozen.
FEATHERS.—Live Geese, 48 to 85 cents.
LARD.—Western, 20½; City rendered, 20 cts.
TALLOW.—12½a13½ cts.
POTATOES.—\$3.00 per bbl.

NEW ADVERTISEMENTS—OCT.

Plants, Nurseries, &c.—John S. Collins.
Wm. Corse & Son.
Edward Burgess.
R. W. Holton.
Jos. J. White.
Albert Van Voast.
John Charlton.
J. Madison Pullen.
John Gage & Son.

Shell Lime—Wm. H. Oler.
Essex Swine—Samuel Thorne.
Cabinet Furniture—S. S. Stevens & Son.
Time Table—Baltimore and Ohio Railroad.
Dexter Circular—Geo. A. Atkins.
Lamb Knitting Machine—Jas. D. Thorn, Gen'l Agent.
Tailor—Wm. F. Green.
Employment for 100 Farmers—Zeigler, McCurdy & Co.
Champagne and Still Wines—Frank Lewis.

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**WM. CORSE & SON,
CLAIRMONT AND FURLEY HALL
NURSERIES,
BALTIMORE, MD.,**

Offer to Dealers and Planters, for the fall of 1868, their extensive and select stock, comprising, Apple, Pear, Peach, Cherry, Plum, Apricots, Nectarines, and Quinces.

A full stock of Choice Native Grape Vines. A large assortment of Small Fruits: Currants, Raspberries, Blackberries, Gooseberries, Strawberries, &c.; also an extensive selection of

**Ornamental Trees and Shrubs,
DECIDUOUS and EVERGREEN.**

Asparagus and Rhubarb Roots of the finest varieties.

Catalogues will be ready by the 15th of October. oct-3t

GRAPE VINES.

A fine stock for the Fall trade of all the reliable varieties, by the *thousand, hundred, dozen, or single one.*

Nurserymen, agents and those wanting good vines for Vineyards or Gardens, can be supplied at low rates.

Samples sent at hundred rates, postage added.

Vines two and three years old, of IONA, ISRAELLA, DELAWARE, ALLEN'S HYBRID and DIANA.

1,000 cuttings of IONAS, one year old, at special rates by the *thousand* only. Wood for propagation, from bearing vines, well ripened and warranted true to name.

Club Agents liberally dealt with.

Price List sent on application.

Address R. W. HOLTON, Haverstraw, Rockland county, N. Y. oct-7t

THE "DEXTER CIRCULAR,"

After six months' trial, is pronounced the most wonderfully quick method ever discovered to make any untrained horse or colt trot fast without the use of a track. One boy made \$900 on two common colts: \$1,200 on another. Price \$1. Address GEO. A. ATKINS, No. 2 Dey St., N. Y.

P. S.—"We recommend every farmer's immediate attention to this circular." J. W. Forman, Troy Mills, Iowa; O. J. Brace, Egremont, Mass.; Charles Palmer, Hillsdale, N. Y.; John Gildersleeve, Ansterlitz, N. Y.; Russel Tremain, Postmaster, Green River, N. Y., and a hundred others. oct-2t

**WM. F. GREEN,
TAILOR,**

Gents garments made to order only and good fit guaranteed.

No. 210 WEST PRATT STREET,

Between Charles and Hanover sts., oct-6t BALTIMORE.

Champagne and Still Wines,

From first crushing of Missouri Grape.

IMPERIAL CHAMPAGNE,

Honorably mentioned at Paris Exposition.

MISSOURI CATAWBA, VIRGINIA SEEDLING and BURGUNDY WINES.

Country merchants supplied on liberal terms. oct FRANK LEWIS, 4 South st., Baltimore.



The Baltimore and Ohio Railroad.

On and after SUNDAY, Sept. 13th, 1868, three daily trains will be run between Baltimore and Wheeling and Parkersburg, as follows:

MAIL TRAIN will leave Baltimore daily (Sunday excepted) at 8.45 A. M. FAST LINE will leave daily (including Sunday) at 5.20 P. M. EXPRESS TRAIN will leave daily (except Saturday) at 9.45 P. M.

These trains connect at Bellaire and Parkersburg for all points West, Southwest and Northwest.

WINCHESTER ACCOMMODATION TRAIN leaves Baltimore daily at 4.10 P. M. (except Sunday.) Leaves Winchester for Baltimore daily (Sundays excepted) at 5 A. M., connecting at Frederick Junction with train for Frederick, and at Hagerstown Junction with train for Hagerstown.

THE ELLICOTT'S MILLS TRAIN leaves Baltimore at 6.20 and 9.50 A. M. and 1.20 and 5.20 P. M. Returning leaves Ellicott's Mills at 7.30 and 11.10 A. M. and 2.30 and 6.30 P. M.

FOR HAGERSTOWN.

Leave Baltimore at 8.45 A. M. and 4.10 P. M., connecting at Hagerstown Junction with Washington county Railroad, arriving at Hagerstown at 2.45 and 9.20 P. M. Returning, leave Hagerstown at 5.10 and 11 A. M., arriving in Baltimore at 10.25 A. M. and 4.45 P. M.

FOR WINCHESTER.

Leave Baltimore at 8.45 A. M. and 4.10 P. M., arriving at Winchester at 2.55 and 9.35 P. M. Returning, leave Winchester at 5 and 10.35 A. M., arriving in Baltimore at 10.25 A. M. and 4.45 P. M.

FOR WASHINGTON.

Leave Baltimore at 3.45, 7 and 8.40 A. M., and 12.30, 4.30 and 8.25 P. M.

FROM WASHINGTON FOR BALTIMORE.

Leave Washington at 7 and 8 A. M., and 12.30, 4.20, 5.40 and 8.30 P. M.

FOR ANNAPOLIS.

Leave Baltimore at 7.00 A. M. and 4.30 P. M. Leave Washington at 7.00 A. M. and 4.20 P. M. Trains leave Annapolis at 6.30 A. M. and 3.45 P. M.

SUNDAY TRAINS.

Leave Baltimore for Washington at 3.45 and 8.40 A. M. and 4.30 and 8.25 P. M. Leave Washington at 8.00 A. M. and 4.20, 5.40 and 8.30 P. M.

For further Information, Tickets of every kind, &c., apply to J. T. ENGLAND, Agent, Camden Station, or at the Ticket Office.

JOHN L. WILSON, Master of Transportation. oct-1f L. M. COLE, General Ticket Agent.

FRUIT HILL NURSERIES.

10,000 Wilson's Early Blackberry Plants of fine growth, for sale cheap, and other small fruits; also Peach, Pear and Apple trees.

Send for Price list.

J. MADISON PULLEN. oct-2t Hightstown, N. J.

100 FARMERS,

Or farmers' sons, can secure employment, paying from \$100 to \$150 per month, from now until next spring.

Address at once, ZEIGLER, McCURDY & CO., oct-3t Philadelphia, Pa.

For Choice Grapes,

Raspberries, Blackberries, Strawberries, Early Rose Potato, Fine Roses, Fine Shrubs, &c., &c., send direct to the producer, and save the dealer's profits.

Send for circular to JOHN CHARLTON, oct-3t Rochester, N. Y.